THYROID FUNCTION IN MENTAL DISEASE MEASURED WITH RADIOACTIVE IODINE, I^{131} [1]

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During the past 25 years there have been over 1,000 research publications on organic factors in mental disease. Prominent among these have been studies of the thyroid gland. It was shown by Bowman(3, 4), and subsequently demonstrated by numerous investigators, that the basal metabolic rate is abnormally low in at least 50% of schizophrenic patients. This led experienced observers to believe that thyroid function might be abnormal in patients with mental disease.

More recently, Hoskins(14) has pointed out that many patients with schizophrenia tolerate exceedingly large doses of thyroid substance, up to 60 grains a day, without evidence of toxicity. However, significant clinical improvement has not been shown to follow administration of thyroid extract in schizophrenic patients. Thyroid ablation has not yet been tried. Thus the rôle of the thyroid gland in mental illness, if any, is still obscure, but the possibility has remained that thyroid function in patients with mental disease is in some unknown way abnormal. Such metabolic abnormality need not be etiologic in mental illness. It could, if present, be an intermediate reflection of disordered metabolism elsewhere.

The Radioactive Iodine Technique

The uniqueness of this study lies in the fact that we are studying thyroid function in mental disease with test doses of the radioactive isotope of iodine (RAI), I^{131}, and that findings are being compared with serum protein-bound iodine (PBI) determinations, and with basal metabolic rate (BMR), plasma cholesterol, and electroencephalograms (EEG). By use of radioactive iodine, a more direct, more exact measure of the activity of the human thyroid gland can now be obtained than has ever before been possible. Determinations of the serum protein-bound iodine level, also a more direct index of thyroid status, have been made possible by a recent advance in biochemical micro-analysis.

The assumptions underlying the clinical use of I^{131} are based on experimental evidence showing these things:

1. Iodine in the body is concentrated maximally in the thyroid gland.
2. Inert iodine and I^{131} act the same in the body.
3. The rate and amount of iodine (and therefore of I^{131}) taken up by the thyroid gland seem to reflect the rate and quantity of thyroxin synthesis and secretion except in a few unusual circumstances.

Therefore, in contrast to the *indirect* quantitative measures heretofore used empirically as a measure of thyroid function, such as basal metabolic rate and plasma cholesterol, we have in the radioactive iodine technique a *direct* measure of 3 phases of physiological function of the thyroid gland in time; the rate of uptake of iodine by the thyroid gland, maximum uptake attained, and rate of excretion of iodine by the thyroid gland can be determined (Figs. 1-4).

No biochemical assays of I^{131} are made in this study. The I^{131} uptake curve has physiological and metabolic significance in that the "iodine turnover" by the thyroid gland has been shown experimentally to be related to the rate of synthesis and secretion of thyroid hormone. As shown by Hamilton and Solely(12), and many others, typical patterns of curves are known to be related to normal, hyperthyroid, and myx-

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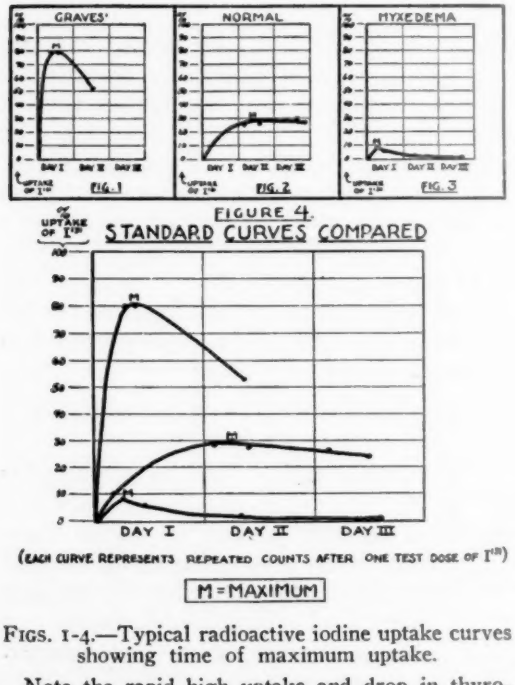
edematous states (Figs. 1-4). Many intermediate types of curves are theoretically possible.

In comparing cases, we shall refer in this preliminary report primarily to maximum uptake attained without regard to rate of uptake or loss of I^{131} from the thyroid gland.



FIGS. 1-4.—Typical radioactive iodine uptake curves showing time of maximum uptake.

Note the rapid high uptake and drop in thyrotoxicosis, the very low uptake in myxedema, and the gradual rise in a normal subject to an intermediate maximum on the second day with relative flattening of the curve thereafter.

OBJECTIVES

Our objective is to attempt to support or to disprove the theory that thyroid function is abnormal in patients with mental disease by using a combination of the above new and old tests of thyroid function. Because it has been thought for years that the thyroid gland might be important in mental disease, results either way will be significant.

The fundamental questions which we are attempting to answer first are:

1. What is the thyroid function in patients with mental disease by clinical evaluation, and as measured by the uptake of I^{131}, and compared with basal metabolic rate, serum protein-bound iodine, and plasma cholesterol?
2. How does this compare with the I^{131} uptake in patients with known thyroid disease and with normal subjects?
3. Is there any difference in uptake in patients with different types of mental illness?
4. What changes are there in thyroid function as measured by radioactive iodine studies after insulin shock, electroshock, electronarcosis therapy; and psychotherapy?
5. Is there any difference in thyroid function during or after treatment in those who improve as contrasted to those who do not?
6. What changes are there in thyroid function as measured by I^{131} tests after the administration of thyroid substance?
7. Is there clinical improvement in patients during and after such thyroid medication?

METHOD OF THIS STUDY

This is a cooperative research project being carried on by 3 departments: psychiatry, radiology, and medicine, at the University of California Medical School and The Langley Porter Clinic. The work is coordinated by a research fellow and periodic conferences to determine policy and evaluate progress are held by the members of the project staff.

Selection of Patients

Four groups of patients have been selected for study: (1) schizophrenic, (2) manic-depressive, (3) mixed psychoneurosis, and (4) anorexia nervosa.

The following criteria are applied in the selection of patients:

1. Concurrence of opinion by the psychiatric staff as to diagnosis.
2. Age range to include only postpubertal cases and to avoid those with clinical evidence of menopausal or senile complications.
3. Absence of complicating organic findings (*e. g.*, head injury, diabetes, etc.)
4. No previous somatic therapy for psychiatric disorders.
5. All cases early, preferably hospitalized for the first time.
6. An equal number of men and women insofar as possible.

All patients studied so far have been selected from the regular inpatient group of The Langley Porter Clinic, according to these criteria, except in a few instances which are indicated.

Control subjects were volunteers from the clerical and medical staff of The Langley Porter Clinic and the University of California Hospital. The controls were matched with patients as closely as possible as to age and sex, and were examined to exclude mental illness and previous thyroid or other organic disease.

Procedures.—A thorough medical and psychiatric evaluation is made of each patient and the following tests are carried out: (1) Serum protein-bound iodine (PBI);[2] (2) basal metabolic rate (BMR);[3] (3) plasma cholesterol;[4] (4) electroencephalogram (EEG); (5) electrocardiogram; (6) skull films; (7) chest film; (8) complete blood count; (9) sedimentation rate; (10) urinalysis.

The first 4 tests are repeated on both patients and controls within a week of each administration of a test dose of I^{131}.

I^{131} *Administration and Counting*

A test dose of 150 micro-curies of I^{131} in 30 cc water is given to the subject orally between 6 and 9 A.M. During the next 72 hours 5 or 6 determinations (counts) of concentration of I^{131} in the thyroid gland are made with the Geiger-Muller counter. Two counts are made during the first day (the day on which the I^{131} is given), 2 counts on the second day, 1 or 2 on the third, 1 on the fourth, and 1 on the fifth. Each count lasts approximately 10 minutes. The patient lies quietly on his back without discomfort of any kind.

A preliminary (pretherapy) I^{131} uptake curve, representing concentration of I^{131} in the thyroid gland over a period of time, is obtained on all subjects. Normal range is estimated, at the present state of knowledge, to be from 20 to 40% uptake with the maximum occurring on the second day. Illustrative uptake curves on our subjects, with derivation of maximum uptake curves, are shown in Figs. 5 and 6.

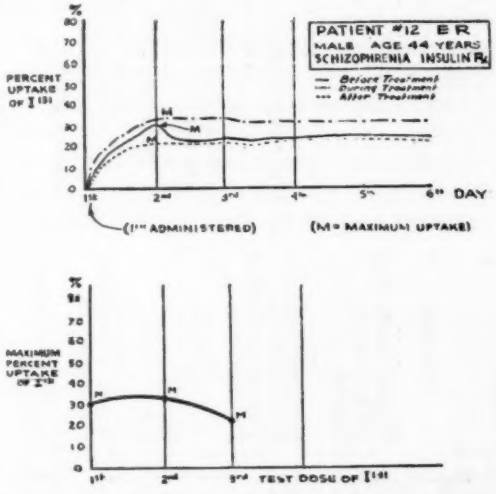


FIG. 5.—Typical patients' I^{131} uptake curves: Derivation of maximum uptake curves.

The points of maximum percent uptake on repeat test doses of I^{131} are plotted to give the maximum uptake curve.

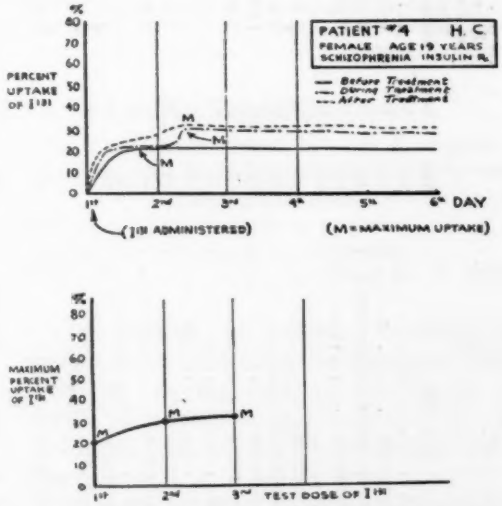


FIG. 6.—Typical patients' I^{131} uptake curves: Derivation of maximum uptake curves.

The points of maximum percent uptake on repeat test doses of I^{131} are plotted to give the maximum uptake curve.

[2] Micro-determination of the protein-bound fraction of serum iodine devised by Kolthoff and Sandell (20), and adapted by W. T. Salter under his personal supervision, is used. Further minor modifications have been made in our laboratory to increase the speed of reaction and decrease errors from contamination and loss of sample. Normal range: 4.0 to 8.0 micrograms per 100 cc of serum.

[3] The Benedict-Roth metabolism apparatus and the Dubois normal standards as modified by Boothby and Sandiford are used. Normal range: plus 10 to minus 10.

[4] Determined according to the modification of the method of Bloor, Pelkan and Allen (2), and adapted to the Klett photo-colorimeter. Normal range: 150 to 250 milligrams per 100 cc plasma.

TABLE 1

Description of Subjects

Thyroid study number	Diagnosis	Age	Sex	Duration of illness prior to admission	Length of hospitalization	Treatment	Comments
1.	Control	24	M	....	....	....	.....
2.	Schizophrenia	35	F	1 yr.	1 mo.	Thyroid medication	.....
3.	Manic-depressive (depressed)	33	F	2 mos.	2 mos.	Electronarcosis	.....
4.	Schizophrenia	19	F	7 mos.	5 wks.	Insulin	.....
5.	Control	60	M	....	....	....	.....
6.	Psychoneurosis	36	M	3 yrs.	2 wks.	Psychotherapy	.....
7.	Psychoneurosis	34	F	2 yrs.	11 wks.	Psychotherapy	Active peptic ulcer.
8.	Schizophrenia	21	F	1½ yrs.	7 wks.	Thyroid medication	.....
9.	Schizophrenia	17	F	3 mos.	3 wks.	Psychotherapy	.....
10.	Control	31	M	....	....	....	First test dose studies not valid.
11.	Control	33	F	....	....	....	First test dose studies only—refused further study.
12.	Schizophrenia	44	M	1 mo.	2 wks.	Insulin	.....
13.	Schizophrenia	22	F	6 mos.	1 mo.	Electroshock	Borderline mental deficiency.
14.	Control	27	F	....	....	....	.....
15.	Schizophrenia	21	F	3 yrs.	3 wks.	Insulin plus Reiter	.....
16.	Schizophrenia	27	F	3 wks.	2 wks.	Electronarcosis	Negro. Treatment discontinued due to discharge against medical advice.
17.	Schizophrenia	31	F	6 mos.	3 wks.	Insulin plus electroshock	.....
18.	Control	34	M	....	....	....	Negro. Deceased after 2 test doses. Acute ulcerative colitis.
19.	Control	28	F	....	....	....	.....
20.	Schizophrenia	22	M	5 yrs.	3 wks.	Electronarcosis	Treatment discontinued due to discharge against medical advice.
21.	Schizophrenia	18	M	3 yrs.	4 wks.	Insulin	.....
22.*	Toxic psychosis	33	M	6½ mos.	11 days	Psychotherapy	Previous thyroid disease. Not included in statistics.
23.	Manic-depressive (manic)	21	F	6 mos.	12 days	Psychotherapy	.....
24.	Schizophrenia	21	M	12 days	5 days	Psychotherapy	.....
25.	Schizophrenia	27	M	3 mos.	18 days	Electronarcosis	Treatment discontinued due to coronary occlusion.
26.*	Control	25	F	....	....	....	Previous and current thyroid medication. Results later.
27.	Control	42	M	....	....	....	Active peptic ulcer.
28.	Anorexia nervosa	28	F	4 yrs.	2 days	None	Diagnostic studies only.
29.	Control	24	F	....	....	....	.....
30.	Schizophrenia	24	M	3 mos.	5 days	Insulin plus Reiter	.....
31.	Control	33	M	....	....	....	.....
32.	Control	20	F	....	....	....	.....
33.	Anorexia nervosa	30	F	7 yrs.	1 mo	Psychotherapy	Extremely debilitated. Weight 77 pounds, height 64".
34.	Schizophrenia	30	M	7 yrs.	2 wks.	Insulin	.....
35.	Manic-depressive (depressed)	27	F	1 wk.	5 days	Electronarcosis	.....
36.	Schizophrenia	36	F	9 mos.	1 day	Electroshock	.....
37.	Control	45	M	....	....	....	.....
38.*	Control	32	F	....	....	....	Previous and current thyroid medication. Results later.
39.	Psychoneurosis	20	F	8 mos.	17 mos.	Thyroid medication	Previous full course of insulin plus Reiter.

* Not included in statistical analysis.

When the studies after the first test dose are completed, patients are assigned to various therapies decided upon by the psychiatric staff. These include insulin shock, electroshock, electronarcosis, combined insulin shock and electrotherapy, or medication with Armour's thyroid extract, each in conjunction with psychotherapy or psychotherapy alone. The I^{131} uptake test is repeated at various intervals during and after these therapies, and is also repeated on controls for comparison. An interval of at least 48 hours and preferably 5 to 7 days is allowed to elapse between the preliminary studies and studies carried on during therapy. In some cases the interval has been as long as 3 months.

Results

At the date of this report, a total of 39 subjects has been studied. Of these 16 are schizophrenic, 3 manic-depressive (1 manic and 2 depressive), 3 psychoneurotic, 2 anorexia nervosa, 1 special patient diagnosed toxic psychosis who is not included in the present statistical analysis, and 14 controls (Tables 1 and 2).

TABLE 2

Subjects in Each Diagnostic Category, and Controls

Diagnosis	
Patients:	
Schizophrenic	16
Manic-depressive	3
Manic	(1)
Depressed	(2)
Psychoneurotic	3
Anorexia nervosa	2
Toxic psychosis	1
	25
Controls	14
(2 on thyroid medication)	
Total subjects	39

Among the patients there were 16 women and 9 men. The controls included 7 of each sex. The age distribution of patients was from 17 to 44 years, of controls from 20 to 60 years. The control aged 60 was 16 years older than any other subject in the study. Median and average values are given in Table 3.

Duration of illness up to time of hospitalization varied from 1 week to 7 years, with an average of 20.6 months and a median of 7 months. This difference between average and median reflects the distortion of distribution caused by patients Nos. 20, 33, and 34. Most of the patients were very early cases (Tables 1 and 4).

Length of hospitalization before thyroid study was in all but 2 subjects less than 60 days, and in all but 4 subjects less than 35 days. The median was 21 days (Tables 1 and 5). This is a relatively short time compared to most studies on organic factors in mental disease in which patients have often been hospitalized for 10 to 15 years prior to study. There has been much criticism of results of studies on patients who have been hospitalized for such prolonged periods.

TABLE 3

Range of Ages and Median and Average Values for All Subjects

Age distribution in years	Patients	Controls
Median	27	32
Average	26.8	33.4
Range	17–44	20–60

TABLE 4

Approximate Duration of Clinically Manifest Emotional Illness Prior to Hospitalization

Duration of illness (all patients)	
Median	7 months
Average	20.6 months
Range	1 week to 7 years

TABLE 5

Time Elapsed Between Day of Admission to Hospital and First Radioactive Iodine Studies

Length of hospitalization	
Median	3 weeks
Average	6 weeks
Range	1 day to 17 months

The number of patients receiving the various types of therapy are shown in Tables 1 and 6. At the date of this report, the course of treatment, and therefore the thyroid study, has not as yet been completed in many cases.

The total number of I^{131} administrations on all 39 subjects so far is 89; the total number of Geiger-Muller counting periods, 753. Seventy-eight test doses on 36 subjects are

included in the present analysis; 50 of them were on patients and 21 were on controls. (The subjects not included are starred in Table 1.)

The results on subjects receiving thyroid extract differ so markedly from all others that they distort the statistical analysis. They are analyzed separately. This includes patients Nos. 2, 8, and 39, and controls Nos. 26 and 38. Results on subjects Nos. 39, 26, and 38 will be reported at a later date.

TABLE 6

PATIENTS RECEIVING VARIOUS KINDS OF THERAPY FOR PSYCHIATRIC DISORDERS

(In all cases, psychotherapy was given in addition to the treatment listed in Table 1)

Therapy: Type of treatment	No. of patients
Electric shock only	8
Insulin shock only	4
Combined insulin and electric shock	3
Psychotherapy only	7
Thyroid extract	3
	25

The first tests on control No. 10 were invalidated by a probable temporary saturation of his system with iodine from an unknown exogenous source. This was indicated by a flat I^{131} uptake curve, and a blood iodine too high to measure by known methods. Therefore they were deleted from the study.

I^{131} Uptake Curves

The range of maximum uptake on the first test dose of radioactive iodine is from 16% to 63%. There is no significant difference in the distribution for patients and controls (Fig. 7). Range and distribution are similar when plotted for the total of 78 test doses on 36 subjects (Figs. 8 and 9). The maximum uptake occurred on the second day following administration of I^{131} on all but 16 test doses. In these 16 instances it occurred on the third day in 13, on the first day in 2, on the fifth day in 1 (Fig. 8). The significance of this variation is not understood but it occurred in both patients and controls. These variant uptake curves did not approximate the thyrotoxic or myxedematous types.

Basal Metabolic Rate, Plasma Cholesterol, Serum Protein-Bound Iodine

The range and distribution of basal metabolic rate, plasma cholesterol, and serum protein-bound iodine are shown in Fig. 10. The median and average values appear in Tables 7, 8, and 9.

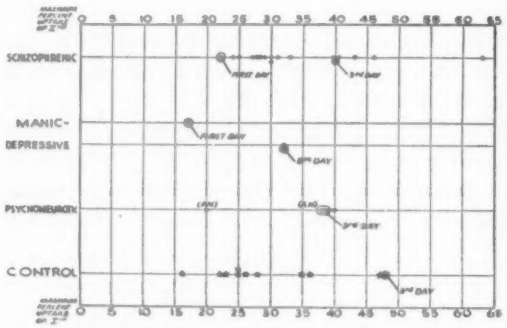


FIG. 7.—Correlation of maximum I^{131} uptake with diagnostic groups (first test dose).

Thirty-six test doses of I^{131} on 36 subjects are plotted. Test doses on patients were before therapy. The distribution is similar for patients and controls. In all cases except those indicated the maximum uptake occurred on the second day.

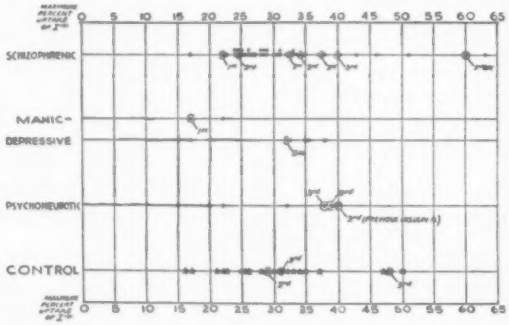


FIG. 8.—Correlation of maximum I^{131} uptake with diagnostic groups (all test doses).

Seventy-eight test doses on 36 subjects are plotted. Distribution remains similar for patients and controls. In all cases except those indicated the maximum uptake occurred on the second day.

There is no significant difference in any of these tests between patients and controls. The basal metabolic rates on subjects in this study are low. The cholesterols tend to be in the upper range of normal. (The one value of 498 mg% was found on a debilitated anorexia nervosa patient who had a markedly elevated NPN.) The blood

iodines fall compactly within the normal range.

In Figs. 11, 12, and 13 the relationship of basal metabolic rate, cholesterol, and serum protein-bound iodine to the maximum uptake of I^{131} is shown. It is evident that there is (a) a direct correlation between

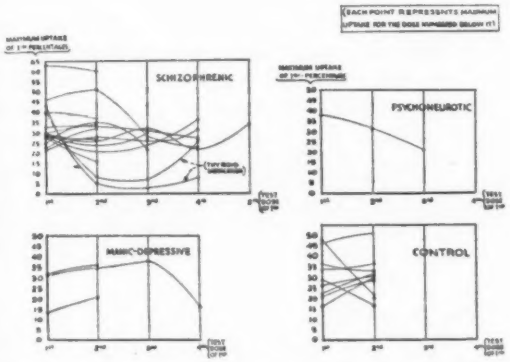


FIG. 9.—Maximum uptake of I^{131} by diagnostic groups.

There is little difference in distribution on the first or on repeat test doses of I^{131} between patients of different diagnostic groups and controls (except for patients on thyroid medication. See text).

TABLE 7

RANGE, MEDIAN, AND AVERAGE VALUES FOR ALL BASAL METABOLIC RATE DETERMINATIONS DONE ON ALL SUBJECTS

	Basal metabolic rate			
	Number of BMRs	Median	Average	Range
Patients	44	−7	−7.9	−32 to +18
Controls ...	17	−5	−9.6	−36 to +7
All subjects.	61	−7	−8.3	−36 to +18

TABLE 8

RANGE, MEDIAN, AND AVERAGE VALUES FOR ALL PLASMA CHOLESTEROL DETERMINATIONS DONE ON ALL SUBJECTS

(In milligrams per 100 cc. of plasma)

	Plasma cholesterol			
	Number of cholesterols	Median	Average	Range
Patients	46	220	231	125 to 498
Controls	20	220	231	170 to 360
All subjects ...	66	220	231	125 to 498

TABLE 9

RANGE, MEDIAN, AND AVERAGE VALUES FOR ALL SERUM PROTEIN-BOUND IODINE DETERMINATIONS DONE ON ALL SUBJECTS

(In micrograms per 100 cc. of serum)

	Serum protein-bound iodine			
	Number of iodines	Median	Average	Range
Patients	45	5.7	5.8	4.5 to 8.2
Controls	20	6.0	5.9	4.8 to 7.5
All subjects..	65	5.9	5.9	4.5 to 8.2

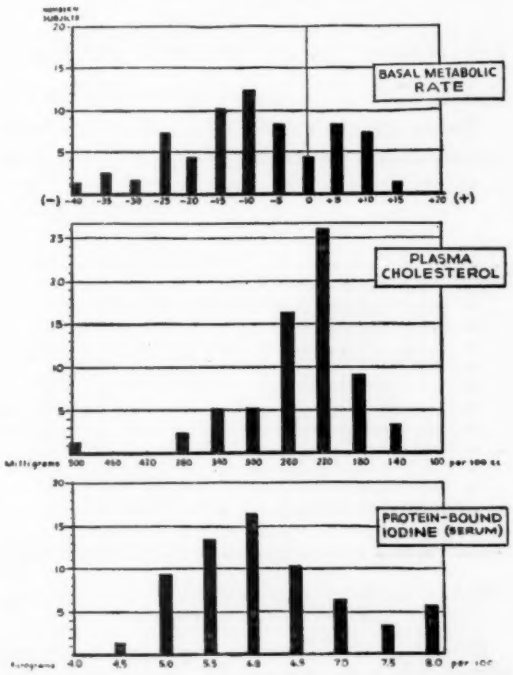


FIG. 10.—Distribution of results: Laboratory tests. All subjects.

The distributions on all 3 tests fall, for the most part, within the normal range (includes both patients and controls). The average BMR is somewhat low, −8.3; the average cholesterol somewhat high, 231 mg%; the average serum protein-bound iodine normal, 5.9 microgm %.

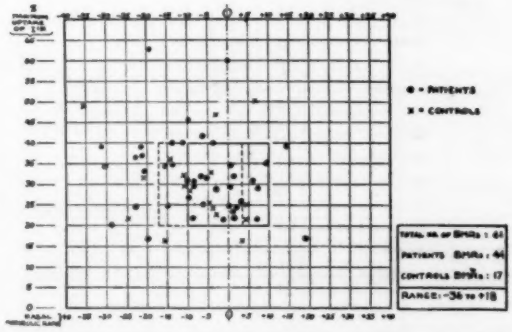


FIG. 11.—Basal metabolic rate correlated with maximum uptake of I^{131} (all test doses).

Normal BMR values correlate with normal percent maximum uptake of I^{131}; deviant BMR values do not correlate consistently with deviant maximum uptakes. The box in the center (solid line) represents the generally accepted normal range of both tests; the dotted lines enclose the average range of BMRs in this laboratory.

normal maximum uptake and normal values in these 3 laboratory tests, (b) no correlation between the few deviant uptakes and laboratory findings, and (c) no difference between patients and controls.

I^{131} Uptake in the Different Diagnostic Groups

Patients and controls alike fall, within wide limits, within the normal range. The largest diagnostic category studied is schizophrenia, and it can be seen that there is also little difference between this group and controls (Fig. 7). This is true of rate as well as quantity of uptake of I^{131}, and on both the first and on repeat test doses (Fig. 8).

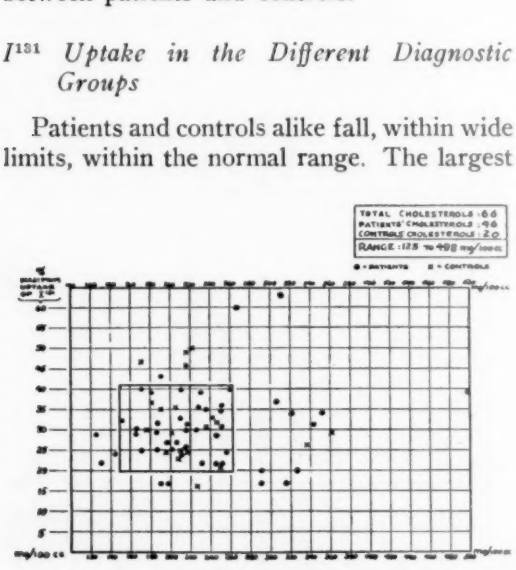


FIG. 12.—Cholesterol correlated with maximum uptake of I^{131} (all test doses).

Normal cholesterol values correlate with normal percent maximum uptake of I^{131}; deviant cholesterol values do not correlate consistently with deviant maximum uptakes. The box in the center represents the generally accepted normal range of both tests.

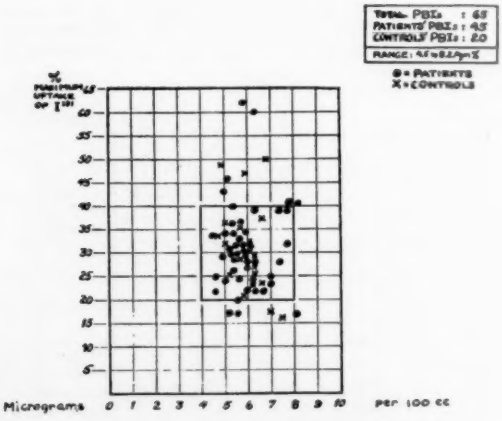


FIG. 13.—Serum protein-bound iodine correlated with maximum uptake of I^{131} (all test doses).

Normal serum protein-bound iodine values correlate with normal percent maximum uptake of I^{131}. The serum protein-bound iodines of patients with deviant percent maximum uptake of I^{131} still fall within the normal range. The box in the center represents the generally accepted normal range of both tests.

One schizophrenic patient had unusually high maximum I^{131} uptakes and accelerated rates on both the first and second test doses. I^{131} uptakes of this magnitude usually occur in thyrotoxicosis (5). However, in this case, both clinical and other laboratory findings failed to support such a diagnosis (Table 10).

An insufficient number of manic-depressive, psychoneurotic, and anorexia nervosa patients have been studied at this time to allow any conclusions to be drawn about I^{131} uptake in these conditions. The 2 patients with anorexia nervosa had high cholesterols, low basal metabolic rates, and normal serum protein-bound iodine tests (Table 11).

Patient No. 33 was extremely debilitated and intermittently borderline psychotic. She was transferred to The Langley Porter Clinic from a state institution where she had been hospitalized intermittently during the previous 6 years. Despite the above basal metabolic rate and cholesterol findings, iodine studies of thyroid function in these 2 patients are normal.

Radioactive Iodine Uptake during and after Therapy

The percentage change in maximum uptake of I^{131} with repeated test doses in patients during therapy, and in controls, is shown in Fig. 14. Of 26 subjects who have had more than one test dose of I^{131}, 22 or 85% showed 15% change or less in from 2 to 5 determinations, and 17 or 65% showed 10% change or less. The change which does occur is not consistently either an increase or a decrease; it occurs in both patients and controls, and there is no difference among the various types of therapy. This small variation may be accounted for by technical error which is estimated to be about 5%, and by metabolic variation in the subjects from time to time. Further study must be done to evaluate the few deviant observations.

Findings on individual patients during and

after therapy are shown in Fig. 15. Although therapy on many is incomplete, so far there seems to be no difference in I^{131} uptake or other studies during or after insulin shock, electroshock, electronarcosis, combined shock, or psychotherapy.

Thyroid Tests during Thyroid Medication

The above does not include the patients receiving thyroid medication. They show a definite and very great variation in maximum I^{131} uptake during treatment. The results were independent of dose of thyroid, as one patient received 3½ grains and one 7 grains a day of Armour's thyroid extract for a period of 4 weeks. The maximum uptake during thyroid medication fell to below 10% within 1 week. The uptake curve remained depressed until 2 weeks after thyroid medication had been discontinued, at which time the maximum value increased but did not reach the original base-line level. Dur-

TABLE 10

MAXIMUM UPTAKE OF I^{131} IN PERCENTAGE, AND CORRESPONDING BASAL METABOLIC RATE, PLASMA CHOLESTEROL, AND SERUM PROTEIN-BOUND IODINE VALUES AFTER THE FIRST AND SECOND TEST DOSES OF RADIOACTIVE IODINE IN A 36-YEAR-OLD FEMALE SCHIZOPHRENIC PATIENT BEFORE AND DURING ELECTROSHOCK THERAPY

	Patient No. 36, unexplained I^{131} uptake of thyrotoxic level			
I^{131} test dose no.	Maximum uptake I^{131}	BMR	Cholesterol	P. B. I.
1	63%	— 19	308 mg%	5.8 micrograms %
2	60%	± 0	266 mg%	6.3 micrograms %

TABLE 11

COMPARISON OF MAXIMUM UPTAKE OF I^{131} IN PERCENTAGE, AND CORRESPONDING BASAL METABOLIC RATE, PLASMA CHOLESTEROL, AND SERUM PROTEIN-BOUND IODINE VALUES AFTER THE FIRST TEST DOSE OF RADIOACTIVE IODINE IN 2 CASES OF ANOREXIA NERVOSA

	Results on two anorexia nervosa patients				
Patient No.	Maximum uptake I^{131}	Time of maximum uptake	BMR	Cholesterol	P. B. I.
				324 mg%	
28	20%	2nd day	— 29	291 mg%	5.6 micrograms %
33	38%	3rd day	— 32	498 mg%	7.7 micrograms %

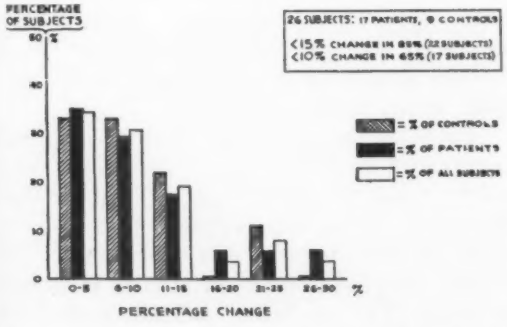


FIG. 14.—Percentage change in maximum uptakes in same subject with repeated test doses of I^{131}.

A 15% or less difference in percent maximum uptake on repeated test doses of I^{131} may be accounted for by technical error and slight metabolic variations of no established clinical significance. Differences above 15% are unexplained.

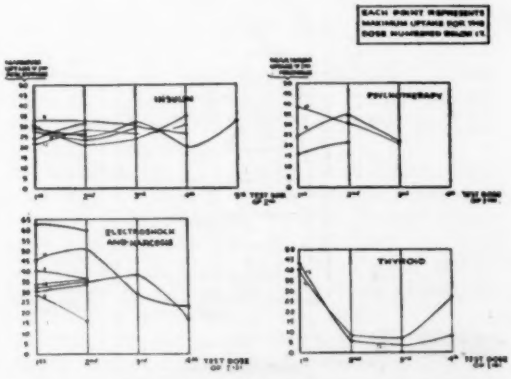


FIG. 15.—Maximum uptake of I^{131} by therapeutic groups.

Only the 2 patients on thyroid medication showed any significant change in percent maximum uptake of I^{131} during treatment. Note that the few other curves which seem to vary appreciably still remain roughly within the normal range.

ing the period of thyroid medication, serum protein-bound iodine and basal metabolic rate increased significantly and the cholesterol fell (Fig. 17).

The 2 schizophrenic patients who received thyroid medication both reported feeling more energetic and interested in their surroundings, and their participation in activities increased. However, it cannot be said that thyroid improved their insight or brought about significant alteration of their psychiatric illness. Both showed clinical evidence of "thyroid effect" on relatively small doses of thyroid, despite reports in the past that schizophrenic patients tolerate unusually large doses of thyroid substance.

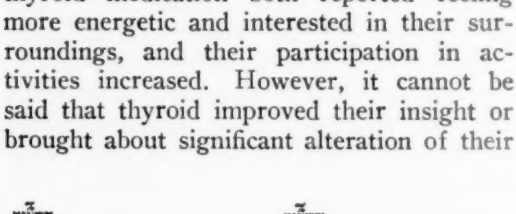


FIG. 16.—Maximum uptake curves; patients improved and unimproved.

There is no significant difference in uptake on repeated test doses of I^{131} between patients who improve and those who do not.

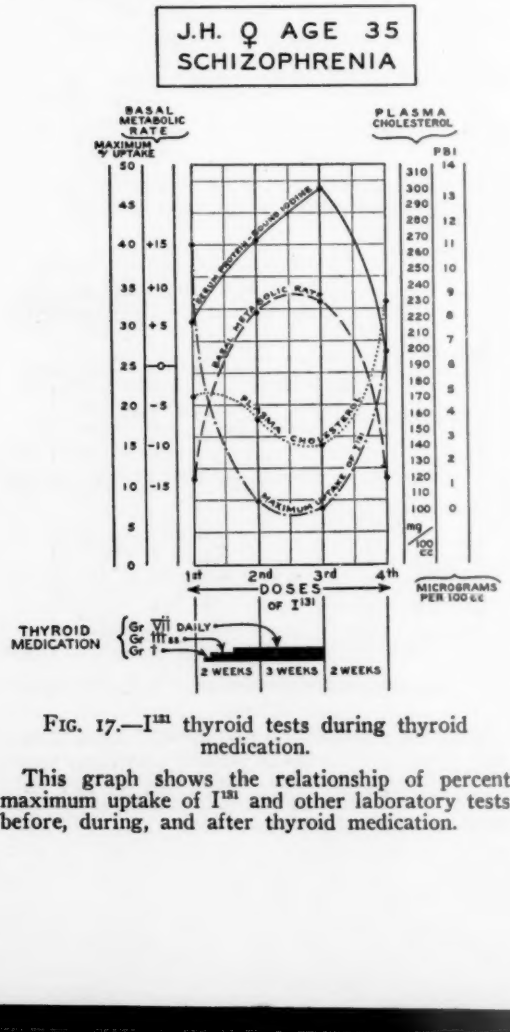


FIG. 17.—I^{131} thyroid tests during thyroid medication.

This graph shows the relationship of percent maximum uptake of I^{131} and other laboratory tests before, during, and after thyroid medication.

Electroencephalographic Studies

The only significant findings on all EEG studies were an increased frequency of alpha waves and quantity of beta waves, during the administration of thyroid, and an increased response to hyperventilation. The increased response to hyperventilation was more noticeable with the increase in time that the thyroid was given. Two weeks after thyroid medication was discontinued, the hyperventilation response was back to normal. No other groups showed changes in repeat EEGs.

Fig. 16 shows that no difference has been demonstrated as yet in I^{131} uptake in patients who improve as contrasted to those who do not.

No correlation has been found so far of I^{131} uptake and age, sex, or duration of psychiatric illness.

SUMMARY AND CONCLUSIONS

This is a report of a study in progress on thyroid function in patients with mental disease, and in controls, as measured by the uptake of the radioactive isotope of iodine, I^{131}, by the thyroid gland, and compared with serum protein-bound iodine, basal metabolic rate, and plasma cholesterol. These 4 tests represent a combination of the best and most widely accepted methods for evaluating thyroid status known today.

Data are given on 36 subjects: 24 patients and 12 controls, and includes a total of 61 basal metabolic rates, 66 plasma cholesterols, 65 serum protein-bound iodines, and 78 I^{131} uptake determinations. The largest diagnostic category studied is schizophrenia. The number of patients in all other categories is insufficient to establish any trends.

The average basal metabolic rates are somewhat low in our subjects, the average plasma cholesterols somewhat high. The serum protein-bound iodines fall compactly within the normal range. The uptake of I^{131}

is widely distributed, with uptakes below 10% and above 40% in several cases but, with the exception of one patient with an uptake of 60%, they fall for the most part within the normal range. In no case did the uptake curves on our subjects resemble the types found in myxedema or thyrotoxicosis. Most important, so far no significant difference has been found between patients and controls by clinical evaluation and as measured by both old indirect and new direct tests of thyroid function.

Our results contrast with many reports in the past of low basal metabolic rate compared with normal controls, and of low plasma cholesterol in schizophrenic patients. Perhaps our more nearly normal findings are due to selection of a group for study with short duration of illness and short length of hospitalization. The significance of reports in the past on patients chronically ill and hospitalized for prolonged periods is open to question. On the other hand, the number of subjects we have studied, particularly control subjects, is still small, and it may or may not be that when a larger sample has been accumulated there will be a shift in trends.

We find no change in thyroid function as measured by the above tests in patients during or after insulin shock, electroshock, combined shock, or psychotherapy. Thyroid medication, however, produced profound alterations in findings on all 4 tests in the 2 patients on whom study has been completed.

It should be pointed out that there has been insufficient analysis of *rate* of I^{131} uptake; we have dealt in this paper primarily with the maximum concentration of I^{131} accumulated in the thyroid gland after a test dose. Since the data presented in this paper were analyzed, results possibly suggestive of some abnormality have been found on 2 depressed manic-depressive patients. (Both patients had a marked drop in their radioactive iodine uptake curve as they improved during electroshock therapy. One patient had an abnormally high initial uptake, the other a high normal uptake. The rate of uptake in the patient with the high normal curve was markedly delayed.) Studies of this diagnostic category, of anorexia nervosa, and of psychoneurosis, of analysis of varying rates of I^{131} uptake, and effects of thyroid medication are being pursued further, and will be reported at a later date.

ACKNOWLEDGMENT

We wish to express our sincere appreciation to Dr. William E. Mayer, Jr., for his interest and assistance in the preparation of the data. Electroencephalographic studies were done under the direction of Dr. Charles L. Yeager. Equipment and materials making possible the use of radioactive iodine in this study were made available through the Atomic Energy Commission.

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CHARACTERISTICS AND SCREENING OF UNSATISFACTORY PSYCHIATRIC ATTENDANTS AND ATTENDANT-APPLICANTS [1]

NATHAN S. KLINE, M. D.,[2] LYONS, N. J.

As nearly as can be determined, from one-third to one-half of the psychiatric attendants in mental hospitals throughout the country either resign or are released each year because of unsatisfactory performance. This sizeable turnover constitutes a major problem: *financially*—the strain is immense; it costs the Government, for instance, approximately $300 to "hire and fire" one such individual—this one item alone runs into the millions; *administratively*—with such a rapid turnover there is no guarantee that wards will be adequately covered; the recruiting cannot even slacken, let alone cease for any period, since men are hardly trained before large numbers of them are gone; *therapeutically*—the most serious problem of all is presented since the attendant, who spends more time with the patients than any other hospital employee, loses much of his potential therapeutic value if he is gone before anything like a useful relationship can be established between him and the patients.

The following study was undertaken in an effort to determine those characteristics of attendants, and potential attendants, which are associated with instability or inferior abilities. If some empirical method can be devised for detecting these unsatisfactory applicants, there should follow a reduction of the tremendous turnover, with its resulting evils.

Preliminary emphasis is given to the fact that the test hereinafter described is *not* intended as an absolute criterion. Its use is primarily to draw the attention of the interviewer (personnel examiner) to an individual and to provide some lead as to which areas need probing. If the test is an effective instrument, it should call attention to the great majority of the men who ultimately prove unsatisfactory and to a minimal number of men who later prove satisfactory.

METHOD

The Population

From September to December of 1946, each new attendant employed at the VA Hospital, Lyons, N. J., was given a personal inventory test. A biosocial history was also obtained. The test results and history were not used in any way to judge the applicant or determine his desirability. These data were reviewed by no one but myself and remained unused until the preparation of this paper. The test and history findings are therefore completely independent of the fate of the 108 men on whom complete records were obtained. It is now possible, in the light of knowing the performance of each of these men, to judge how adequately the test *would* have screened them and to consider whether the various groups delineated have special characteristics.

Population Breakdown

At the end of a 2-year period, the records of each of the 108 men included in the study were reviewed. On the basis of performance, the total population was broken down into the following categories:

A. *Unsatisfactory*

The total of the 4 following groups. The performance of these men was such that if they had not been employed, the hospital would have profited.

1. *Separated.*—Men who were involuntarily removed from duty because of abusive, immoral, or irresponsible behavior, or for any other form of dereliction of duty.

2. *Anticipation of Separation.*—Atten-

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dants who resigned voluntarily, rather than be involuntarily separated for dereliction of duty.

3. *Unstable.*—Men who showed marked mental or emotional personality defects and were, as a consequence, unable to adjust to their work and therefore resigned.

4. *Dissatisfied.*—Men who left with chronic complaints of an unreasonable nature about situations which other attendants found at least tolerable: inability to get along with supervisors, excessive complaints about working conditions and similar extreme "gripes" are some examples.

B. *Satisfactory*

Total of 2 following groups. Generally speaking, these are the men who make at least passably acceptable attendants.

1. *Better Jobs.*—These are the men who, so far as could be determined, had the makings of satisfactory attendants but left for jobs that appealed more for financial, or other, reasons.

2. *Still Here.*—Men still on duty as attendants at the end of the 2-year test period. (Total of "Blue Ribbon" and "Others Still Here" categories.)

a. *Blue Ribbon.*—This group is the "cream" of the attendants in the Still Here Group. They have all received 2 promotions of grade and have efficiency ratings of "Excellent" or "Very Good."

b. *Others Still Here.*—Attendants still here who do not qualify for the "Blue Ribbon" group.

C. *Miscellaneous and Unknown*

Men are included here who do not properly fit under other categories. A group of these men took the job until they were accepted for college or other schools. Some left for reasons that could not be definitely determined; others for unclassifiable reasons.

The Test

The Personal Inventory Test is a second modification[3] of the N.D.R.C. (National Defense Research Council) test. The instructions and the test are listed in Appendix A.

Verbal instructions emphasized that falsification of a factual question was ground for serious action. Reassurance that the test was for "placement" was given to combine "honey" with the threat of "a big stick." The written instructions were reviewed verbally and special emphasis placed on the fact that, if both alternatives were inaccurate, the one which most nearly fitted the facts should be checked.

A separate sheet was provided for the answers (see Appendix B, where the sheet is marked with the *typical* answers). A punched-out cardboard or metal "Key" Sheet was placed over the answer sheet and having only the atypical spaces visible made scoring a matter of seconds (once it has been determined that all questions have been answered and none omitted).

Scoring Method

Each item on the Personal Inventory which is answered atypically is scored as one point. Omitted items are also scored atypically. Thus the more atypical answers, the higher the score. On the basis of former use of the first modification of the test, it was presumed that a score of 20 items answered atypically would be cause for close scrutiny of the individual and this has actually proved to be the best "cutting point." There are, in addition, 10 "stop items," an atypical answer to any of them constituting a reason for investigating the man closely (Questions Nos. 6, 10, 18, 29, 39, 40, 63, 81, 82, 85). The problem of scoring omitted answers was not considered in advance and, because of inadequate administration of the test, some of the men left questions unanswered. Since failure to answer a question was not the usual pattern, it was finally decided to count unanswered questions as atypical.

It is possible in retrospect to determine what percentage of the men who proved undesirable would have been "caught" in the screening net (either by a score of 20 plus or by one of the "stop items"), had the test been actually used for screening purposes. In this manner, the validity of the test itself can be tested.

[3] The first modification was made for use in the U. S. Maritime Service and has been discussed at length in "The Psychobiological Program of the War Shipping Administration," Applied Psychology Monograph No. 12, Stanford University Press 1947.

RESULTS

Effectiveness of Screening

Had the test actually been used as a screening device, as can be seen from Table 1 and Fig. 1, less than a quarter of the Blue Ribbon group would have been "caught"; whereas, almost 83% of the Unsatisfactory group would have been scrutinized. Of the total group, less than 4% proved unsatisfactory and were not caught by the screening net. The number of interviews could have been cut approximately in half.

Group Distribution

The percentage distribution in each of the categories for the total group of 108 attendants is also presented in Table 1 and Fig. 1. Only 40 of the original group still remain and only 13 of these can be considered the highest calibre attendant. Therefore 37% of the men are still on duty; exactly a quarter of the group left to obtain better jobs; slightly more than a quarter (27%) proved definitely to be unsatisfactory; and the remaining 11% left for miscellaneous reasons. This is shown graphically in Fig. 1.

Duration of Employment

The duration of each man's service was determined and broken down into 1-month periods. It then becomes possible to examine whether different types of men leave after differing periods of employment and whether there is any "crucial" period when attrition is abnormally great.

Fig. 2 presents a graph of the number of months served by each of 68 attendants who did not complete 2 full years of service. Several facts emerge as quite significant. Half of the total number of men who leave, do so in the first 6 months; this of course is twice the number expected for an equal distribution. Even more important, 55½% of the men in the Better Jobs category are in this group that stays less than half a year. Of the men who proved unsatisfactory, only 48.3% leave during this period. Thus, it is evident that it is not primarily the unsatisfactory men who "tend to eliminate themselves." A greater percentage of desirable men leave than of the undesirable.

TABLE 1

SUMMARY OF TEST SCORE DATA

	No. of subjects	Averages			Standard deviation for total wrong	Coefficient of variation for total wrong	Average no. of stop items	Average no. of stop items for those having them	% having stop items	% caught by screening
		Wrong—average	Omitted—average	Total—average						
Total (Including Miscellaneous and Unknown)	108	13.3	2.5	15.8	6.69	42.1	.72	1.5	49	55.6
A. Unsatisfactory	29	14.7	3.3	18.1	6.34	35.0	1.34	1.8	76	82.8
1. Separated	11	13.2	3.7	16.9	4.70	27.8	1.09	1.7	64	81.8
2. Anticipation of Separation	5	14.4	1.2	15.6	3.72	23.8	1.00	1.2	80	80.0
3. Unstable	8	16.4	1.6	18.0	6.69	37.2	1.50	2.0	75	75.0
4. Unjustifiably Dissatisfied	5	15.8	7.4	23.2	7.98	34.4	2.00	2.0	100	100.0
B. Satisfactory	67	12.7	2.3	15.0	6.87	45.8	.46	1.3	34	41.8
1. Better Jobs	27	11.6	2.2	13.8	5.90	42.8	.63	1.3	48	48.1
2. Still Here	40	13.5	2.3	15.8	7.31	46.3	.35	1.4	25	37.5
a. "Blue Ribbon"—2 promotions with efficiency ratings of Excellent and Very Good	13	8.9	4.5	13.5	6.52	48.3	.15	1.0	15	23.1
b. Others Still Here	27	15.7	1.3	17.0	7.40	43.5	.45	1.5	30	44.0
C. Miscellaneous and Unknown	12	12.9	1.8	14.7	4.97	33.8	.67	1.0	75	75.0

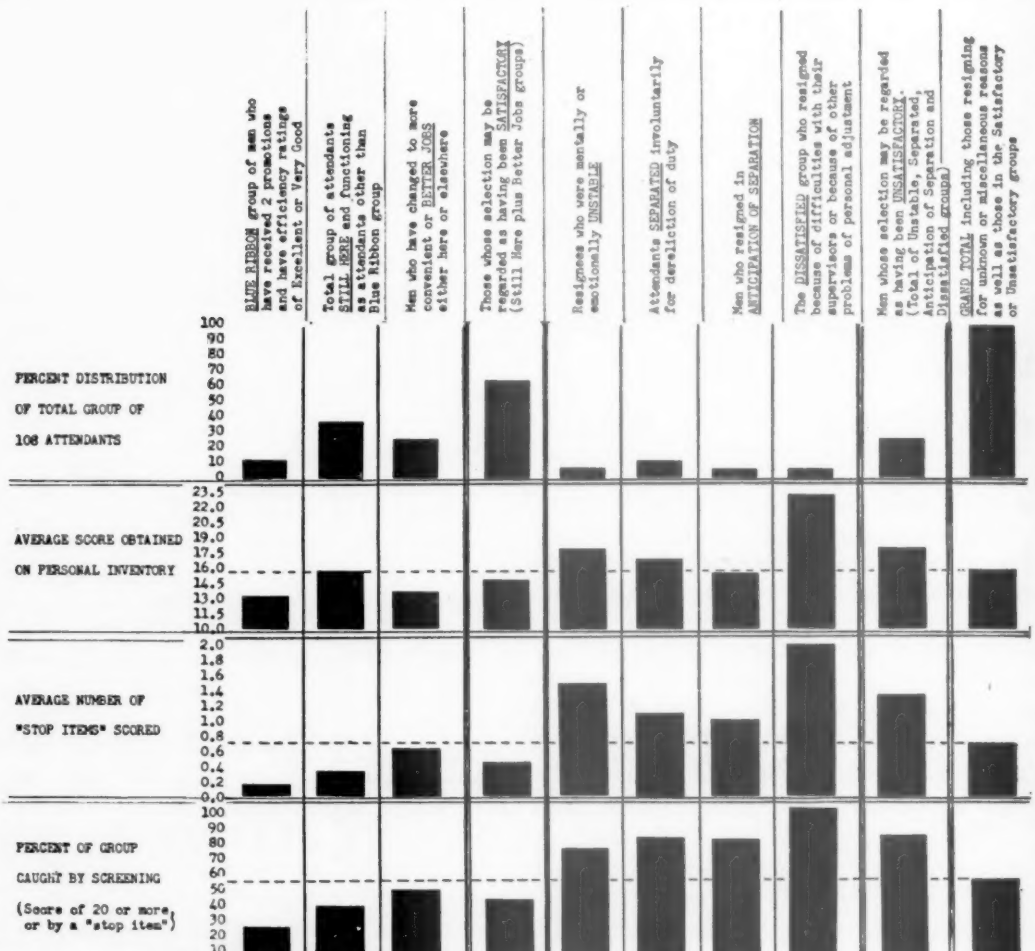

FIG. 1.—Effectiveness of screening in the different groups.

At the end of the 2-year period, about 2 of every 3 men hired (63.0%) were no longer on the job. In the course of the first half year, about one-third were lost (31.6%). At the end of a year, an additional 10.1% were gone; at the end of 1½ years another 12.0%; and during the 4th half year, another 9.3%. The loss during the first half year is therefore about 3 times that for any of the succeeding half-year periods.

TABLE 2

AGE DISTRIBUTION

	Mean age	S. D.
Total	30.2 ± 5.4	8.0
Unsatisfactory	31.1 ± 5.8	8.7
Better Jobs	28.3 ± 4.5	6.7
Still Here	31.6 ± 6.0	8.9
"Blue Ribbon"	28.5 ± 4.6	6.8
Still Here exclusive of "Blue Ribbon"	33.0 ± 6.7	10.0
Miscellaneous and Unknown	29.5 ± 4.4	6.5

Age

The age distribution of the different groups is presented in Table 2. Several points are of interest. The Blue Ribbon group of attendants is about 5 years younger on the average than the other attendants still remaining. The age of these Blue Ribbon men is almost identical with those men leaving for Better Jobs, which tends to point to the fact that these 2 groups are similar in certain characteristics. The attendants other than the Blue Ribbon group who remain, while "satisfactory" in the sense that they are able to get along, are not necessarily the most

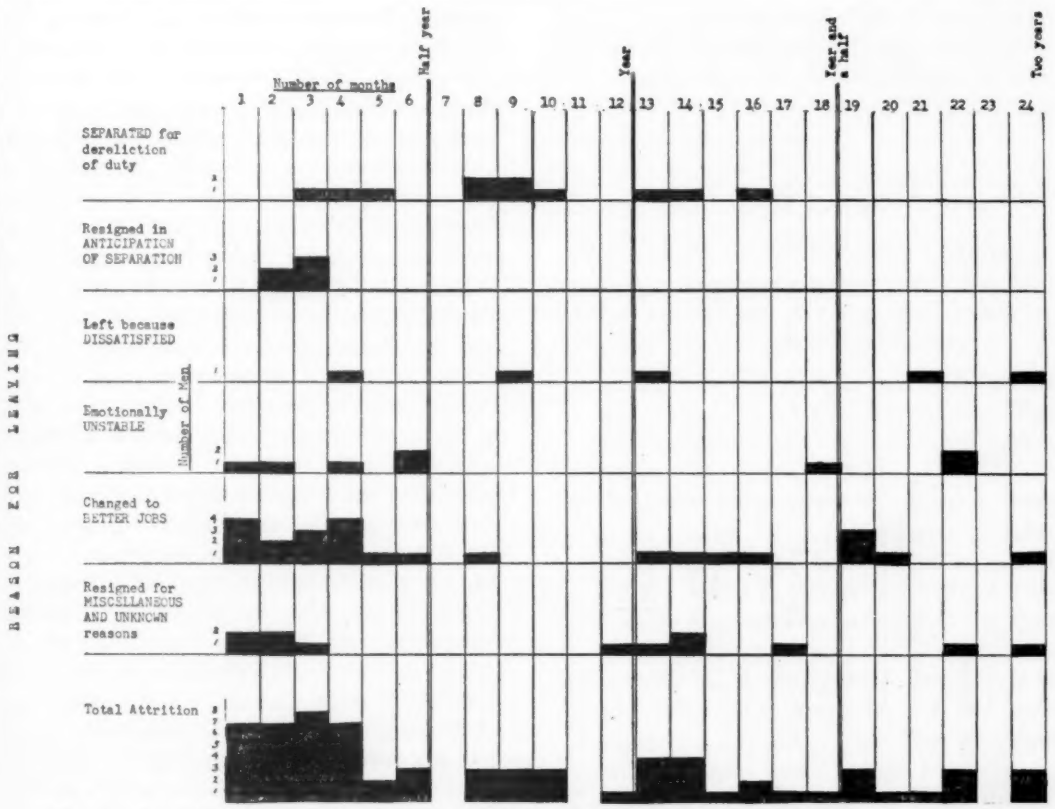

FIG. 2.—Length of time employed (in months) for the 68 attendants who left the hospital before the two-year test period was completed.

highly desirable type of employees, and their age group, among other characteristics, is closest to the Unsatisfactory group.

Test Scores

A summary of the test score data is shown in Table 1. The average number of atypical answers is only 8.9 for the Blue Ribbon group as contrasted with 14.7 for the Unsatisfactory group. The group with the next lowest score is the Better Jobs group, reconfirming the impression that the Blue Ribbon and Better Jobs groups are made up of similar men.

The Still Here, exclusive of the Blue Ribbon group (labeled as "Others Still Here"), has an even higher atypical answer average than the Unsatisfactory group.

The greatest number of omitted answers occurred in the Blue Ribbon group, probably showing a reluctance of the men to commit themselves to alternatives neither of which appeared desirable or suitable. Even under these conditions, with omitted answers scored as atypical, the Blue Ribbon group has the lowest total average score, but it is almost identical with the Better Jobs group. The Unsatisfactory group averages 5 points (37%) higher in atypical answers than the Blue Ribbon attendants.

The average number of stop items is only .15 for the Blue Ribbon group in contrast to an average of 1.34 for the total Unsatisfactory group. There are considerably fewer attendants in the Blue Ribbon group having stop items (only 15%) than in the Unsatisfactory group (where 76% have stop items). Even when stop items occur, there is only 1 such item per man in the Blue Ribbon group in contrast to almost 2 per man (1.8) in the Unsatisfactory group. (See Table 3 for details.)

Item Analysis

Since the Blue Ribbon group is the most highly desirable, a comparison of significant

TABLE 3

OCCURRENCE OF STOP ITEMS

	Stop items only No. of stop items			Total with stop items only	Stop items and high score No. of stop items			Total with both	Total with stop items	Total with 20 score only
	1	2	3		1	2	3			
Total	24 (22.2%)	5 (4.6%)	2 (1.9%)	31 (28.7%)	10 (9.3%)	8 (7.4%)	4 (3.7%)	22 (20.4%)	53 (49.0%)	7 (6.5%)
Satisfactory	10 (9.3%)	3 (2.8%)	0	13 (12.0%)	5 (4.6%)	5 (4.6%)	0	10 (9.3%)	23 (21.3%)	5 (4.6%)
Better Jobs	6 (22.3%)	1 (3.71%)	0	7 (26.0%)	3 (11.1%)	3 (11.1%)	0	6 (22.3%)	13 (48.2%)	0
Still Here	4 (10.0%)	2 (5.0%)	0	6 (15.0%)	2 (5.0%)	2 (5.0%)	0	4 (10.0%)	10 (25.0%)	5 (12.5%)
"Blue Ribbon"	1 (7.7%)	0	0	1 (7.7%)	1 (7.7%)	0	0	1 (7.7%)	2 (15.4%)	1 (7.7%)
Others Still Here	3 (11.1%)	2 (7.42%)	0	5 (18.5%)	1 (3.71%)	2 (7.42%)	0	3 (11.1%)	8 (29.7%)	4 (14.8%)
Unsatisfactory	9 (31.0%)	2 (6.9%)	2 (6.9%)	13 (44.8%)	2 (6.9%)	3 (10.3%)	4 (13.8%)	9 (31.0%)	22 (75.9%)	2 (6.9%)
Separated	2 (18.2%)	1 (9.1%)	2 (18.2%)	5 (45.5%)	2 (18.2%)	0	0	2 (18.2%)	7 (63.7%)	2 (18.2%)
Anticipated Separation	3 (60.0%)	0	0	3 (60.0%)	0	1 (20.0%)	0	1 (20.0%)	4 (80.0%)	0
Unstable	2 (25.0%)	1 (12.5%)	0	3 (37.5%)	0	1 (12.5%)	2 (25.0%)	3 (37.5%)	6 (75.0%)	0
Dissatisfied	2 (40.0%)	0	0	2 (40.0%)	0	1 (20.0%)	2 (40.0%)	3 (60.9%)	5 (100.0%)	0
Miscellaneous and Unknown	5 (41.6%)	0	0	5 (41.6%)	3 (25.0%)	0	0	3 (25.0%)	8 (66.6%)	0

deviations between this group and the Unsatisfactory group was done, using Pearson's chi square method. Those items found to deviate significantly at the 5% level (less than 1 possibility in 20 of chance occurrence) were test items 1, 7, 37, 41, 43, and 85. Those showing significance at the 10% level (less than 1 possibility in 10 of chance occurrence) were items 55, 63, 80, and 81. In addition, there were certain items which were not answered atypically by any man in the Blue Ribbon group but, although there were atypical answers in the Unsatisfactory group, the total number of men involved was too small to give statistically significant differences. These items should be considered as possibly significant and, when a larger series is available, should be reviewed again. These items are 2, 3, 6, 10, 18, 30, 31, 32, 36, 40, 70, and 74. Six other items were not answered atypically by either the Blue Ribbon or Unsatisfactory groups (Nos. 9, 16, 47, 71, 72, and 75). These could probably be eliminated if a larger series also showed no occurrence of atypical answers. Certain other items, 4 in all, seem to be "negatively significant"; *i. e.,* a statistically greater number of Blue Ribbon attendants answered these atypically than did men in the Unsatisfactory group. The finding of 4 "negatively significant" items at the 10% probability level (Nos. 21, 45, 46, and 58) is not particularly disturbing, since on purely statistical grounds $8\frac{1}{2}$ such items might be expected. Since less than half that number actually occurred, the only caution is not to regard *all* the positive items at the 10% probability level as inviolate.

Stop Items

The relative effectiveness of specific questions must inevitably be raised. Could the test be reduced in length by merely presenting a dozen or so stop items and retain its apparent effectiveness? The raw data dealing with this question are presented in Table 2. If the stop items alone had been used, only 7 less men in the entire group would have been caught by the screening. Five of these were in the Satisfactory group (only 1 in the Blue Ribbon) and 2 in the Unsatisfactory group (both in the Separated category). It would certainly be worth attempt-

ing to use this as a short-cut method if time were not available for a full test. Whether the individual items would retain their significance without the "buffering" of more or less neutral questions cannot be predicted in advance.

In the Blue Ribbon group, questions 29 and 82 were the only 2 stop items answered atypically, one by each of two men. In the Unsatisfactory group, 7 individuals (24%) gave atypical answers to stop item 63 ("My family is somewhat disappointed in me") and 8 atypical answers (28%) to question 85 ("My health is average"—rather than "My health is good"). In the group of attendants who left for better jobs, Question 85 was also the most frequently answered atypically, although not so frequently as in the Unsatisfactory group. Question 63 was not answered atypically by any of the men in the Blue Ribbon group, but Question 18, which had been answered atypically by 4 of the Unsatisfactory group, was answered atypically by 5 of the men leaving for better jobs. ("I am reckless" rather than "I am careful"). No more than 2 of any stop items were answered atypically in the total for the Better Jobs, whereas 4 atypical answers were given to Questions 39, 40, 81, and 82 in the Unsatisfactory group, in addition to the already mentioned items (Questions 63, 85, 18). Over a quarter of the men Separated for dereliction of duty had been divorced or separated (Question 81) and another quarter had had a mother working outside the home (Question 82). Over half of the group gave histories of one of these two conditions. Only one man in the Better Jobs group had been divorced or separated and in the Blue Ribbon group none of the men had been divorced or separated, with only one having a mother who had worked outside the home.

Tables 1 and 2 summarize these findings.

Table 2 shows the number of stop items answered atypically by any one individual and its relationship to scores of 20 or above. The most important points are that in the Blue Ribbon group only one individual (7.7%) had a single stop item and another one individual (7.7%) had a single stop item with a score of 20 or more. In contrast, 9 individuals (31.0%) in the Unsatisfactory group had one stop item; 6.9% had 2 stop items, and another 6.9% had 3 stop items. Six and nine-tenths per cent also had a stop item with a high score; 10.3% had 2 stop items with high score; and 13.8% had 3 stop items with high score.

Characteristics of the Various Groups

An analysis of the biosocial histories in comparing the Blue Ribbon with the Unsatisfactory group showed the following items to be of statistical significance:

1. A significantly greater number (at the 10% level) of attendants in the Blue Ribbon group came from "rural" areas —towns of 5,000 or less.
2. At the 12% level of significance, more men in the Blue Ribbon group were single than in the Unsatisfactory group.
3. At the 10% significance level, there were less divorces and separations in the Blue Ribbon group.
4. At the same significance level, men in the Blue Ribbon group *did not* have children. (In fact, only one attendant in this group was a father.)
5. None of the parents of Blue Ribbon attendants were divorced or separated.
6. Although several attendants in the Unsatisfactory group had divorced or separated parents (none in the Blue Ribbon group), the total number of cases studied was not sufficient to reach a statistically significant level.
7. The mother of only one of the Blue Ribbon attendants worked outside the home and although 5 of the mothers in the Unsatisfactory group did so, the total was not sufficient to provide a significant difference.
8. The same situation as in 7 is true in regard to completion of 8 grades of grammar school.
9. At the 5% level of significance (only one possibility in 20 of chance occurrence), men in the Blue Ribbon group had completed 3 or more years of high school, more often than the men in the Unsatisfactory group.
10. At about the 12% level of significance was the difference that none of the Blue Ribbon group had left school before the age of 17, whereas 5 men in the Unsatisfactory group had.

11. None of the Blue Ribbon, but 3 men in the Unsatisfactory group, had less than 2 years of military service.
12. Of those who had worked prior to service none of the Blue Ribbon group, but 14% of the Unsatisfactory group, had held a job for *less than a year*.
13. At a 1% level of statistical difference (only one possibility in 100 of chance occurrence) was the difference that men in the Unsatisfactory group had been out of service more than one year prior to their coming to work here in contrast to the Blue Ribbon group.
14. As might be expected, at the same level of significance, men in the Blue Ribbon group had come directly from service to positions here.
15. Men in the Unsatisfactory group had a greater number of "post service job scores" of less than 10. The job score was obtained by dividing the number of jobs since discharge into the number of months since release from military service. This would give a rough estimate of vocational stability.[4]
16. A significantly greater number of the Unsatisfactory group listed their health as "average" rather than "good" in contrast to the Blue Ribbon group.
17. Similarly, a greater number of the Unsatisfactory attendants listed previous medical illnesses.
18. An item of major interest was the fact that a significantly greater number of men in the Unsatisfactory group gave "security" as their reason for applying for position of attendant, whereas a substantially greater number of the Blue Ribbon group listed economic reasons. Of even greater statistical significance (less that one possibility in 100 of chance occurrence) was the fact that men in the Blue Ribbon group gave "desire for experience" as the primary reason for applying for the position of attendant.

Previous Hospital Experience

In addition to the previous questions showing deviations of statistical significance are the results of analysis of the answers regarding previous hospital experience. Although 12 of the 29 men proving Unsatisfactory had had previous hospital experience, either in service or elsewhere, only one had worked in a neuropsychiatric hospital and that one for only four months. In contrast, only 19 of the 67 men who proved Satisfactory (Better Jobs plus Still Here groups) had had hospital experience, but 10 of the 19 had worked in neuropsychiatric hospitals. That men who have had previous experience in neuropsychiatric hospitals prove more successful as attendants is statistically significant at about the 2% level (only 2 possibilities in 100 of chance occurrence).

Between the Unsatisfactory and the Blue Ribbon groups in regard to previous experience in neuropsychiatric hospitals, significance was at the 5% level. Therefore, all factors being equal, men with previous neuropsychiatric hospital experience appear to do considerably better than those without this background. Of the 12 men in the entire series who had such neuropsychiatric experience, 1 left for unknown reasons; 10 (83%) proved satisfactory; and only the 1 man with 4 months' experience proved unsatisfactory. This is not included as a question on the Personal Inventory for fear that it might defeat its own purpose, since many individuals with previous neuropsychiatric hospital experiences are extremely undesirable. These are "floaters" and alcoholics, who are unable to adjust, or even attempt adjustment at any other level. This type of individual should be screened out by other parts of the test. If a man meets the other qualifications, however, having had previous neuropsychiatric hospital experience seems to indicate that he will make an even better than average attendant.

DISCUSSION

Two points of possible criticism will be raised at once. Awareness of these shortcomings of the present paper does not nullify the criticisms but rather raises the caution that the present results should be taken *cum grano salis*. The first point is that the data have been "overstatisticized." Certainly conclusions drawn from only 108 cases may later prove to be erring in numerous respects. A larger series is now in progress. The sta-

[4] *Vocational Stability.*—This method of measurement was suggested by Dr. Ralph Norman of Princeton University.

tistical treatment of the present series will undoubtedly be of great value in the establishment of methods for dealing with the larger series, which we hope to obtain.

The second point of criticism is that I may not be measuring "personality" but something entirely different. Even before Dr. Albert Ellis, of the New Jersey State Hospital at Greystone Park, raised the issue, we had begun administration of the A.G.C.T. (Army General Classification Test) to determine the relationship of intelligence to performance. Clarification of these two points must await the collection of a larger number of subjects.

The distribution in the population breakdown must be considered slightly atypical since a considerable number of attendants came to us directly from service. Cursory review of turnover since that time shows that it has increased, rather than decreased. It may well be that the men included in this study were of a higher calibre than the type of individual who is now applying for this position.

The age distribution, according to breakdown, would seem to indicate strongly that men under 30 are able to adjust to this type of employment better than older men.

The fact that twice the expected number of men leave during the first 6 months of employment points strongly to one or more of the following factors to account for the disproportionately large attrition during this period. It may be that misrepresentations were made as to the adequacy of living quarters. Another factor to be considered is the indoctrination and orientation. In our hospital, this is probably not of major importance since very adequate orientation is given, as well as a 75-hour indoctrination and training course. Many of the attendants in this group, coming more or less directly from service, may have expected organized recreational programs under a social director (since many mental hospitals are isolated from the more usual recreational facilities of a large city, it might be a wise expenditure to make provisions for such a program.) Misunderstandings and differences of opinion between old and new employees may also have led to difficulty in this initial period. It is recommended that modified group therapy sessions be held, with all the personnel of a particular ward attending, in order to work out these problems without the formation of cliques and intergroups. There should also be occasional sessions of a similar type which include the nurses and doctors to give a feeling of coherence to the activity of the entire ward. Recognition of the attendant as being of equal importance with the nurses and doctors will help instill the sense of accomplishment, without which the work becomes mere drudgery. At our own hospital, the simple expedient of calling the men "Psychiatric Aides" rather than "Attendants" has proved beneficial. As previously mentioned, it is not the unsatisfactory men who "tend to eliminate themselves," since a higher percentage of "satisfactory men" leave than men who prove to be "undesirable." Attention to this problem is therefore of paramount importance.

The fact that stop item 63 ("My family is somewhat disappointed in me") and question 85 ("My health is average" rather than "My health is good") were most frequently answered in an atypical manner is of more than casual interest. Atypical answers to both these questions would seem to imply a good deal of self-depreciation. The large number of men divorced or separated may indicate a poorer than average capacity for adjustment.

The fact that the average test score in the Unsatisfactory group was over 65% greater than in the Blue Ribbon group would seem to indicate that the total score was also of value in differentiating the population. Exactly what the test itself measures is extremely difficult to ascertain. Unfortunately, we do not exactly know the characteristics that go to make a good attendant, and for the time being an empirical method, such as we use here, is about the only possible approach.

Throughout the study are numerous indications that the men leaving for Better Jobs very closely resemble the Blue Ribbon group. (Age distribution, test score results, characteristics, etc.) The 25% of men leaving for Better Jobs would probably make excellent attendants. Efforts should therefore be made not only to screen out the unsatis-

factory applicants but to retain the satisfactory ones who leave for other jobs.

Of the 18 items proving to be of statistical significance under the discussion of characteristics of the various groups, a few may be due to chance and a few others to local conditions. Use of the test in other parts of the country will help to determine which are truly important. The State of Minnesota plans to use this, as well as other instruments, in screening the psychiatric attendants for the state hospitals, and their results will prove of great value in reviewing the value of the test itself.

After review of those questions which proved to be of actual or potential significance, a revision of the test which includes only 25 questions [5] was made with the possibility in mind that it might contain all the "essential" ingredients. Actual use of the test, however, would be necessary to confirm this possibility.

Final emphasis must be placed on the fact that the test was not intended as an "absolute" screening device. Nothing will substitute for trained personnel interviewers, but the test is potentially of great value in allowing these interviewers to concentrate their attention on questionable applicants and also gives some indication of the area in which problems may be found. It is assumed that the interviewer will check on those questions which may indicate an epileptic history (Nos. 9, 45, 69), possible posttraumatic personality changes (No. 21) and reasons for rejection by the armed services, or 4F status during the war.

In our experience, the use of this instrument allows the same number of interviewers to spend twice as much time with questionable applicants. We have in addition worked out a system whereby applicants about whom the interviewer is undecided are referred to the psychology department and if questions still exist, to a staff psychiatrist.

The Personal Inventory on its first day of use as an actual screening device at this hospital "picked up" certain individuals who upon interview and referral proved to be an epileptic, a homosexual, and a severely neurotic individual, as the test had suggested. These 3 applicants, at least in the opinion of the personnel interviewers, would probably have been otherwise missed. The test seems to cover a wider area of the applicant's personality and background than could be gleaned from an ordinary interview and allows the personnel man either to approve rapidly of the applicant, or to concentrate his attention on questionable material.

[5] Marked with an asterisk in Appendix A.

SUMMARY

1. A Personal Inventory Test was given to 108 psychiatric aides and biosocial histories were obtained at the time of their employment. The test was not used at that time as a screening device, but 2 years later the fate of the 108 men was reviewed and the efficacy of the test as a test screening device showed that, if it had been used for screening, 83% of the Unsatisfactory group would have been "picked up," whereas only 23% of the best men would have been caught by the screening.

2. The use of the test as an aid to personnel interviewers is emphasized, and the fact is stressed that it should not be "an absolute device."

3. The Satisfactory aide tends to be single, under 30, from a small town, parents never having been divorced or separated, mother not having worked outside the home. He feels that his health is good. If married, he has not been divorced or separated. He took the job primarily "for experience" or for economic reasons. Previous hospital experience in an N.P. Hospital stands him in good stead.

In contrast, the Unsatisfactory attendant is more likely to be married, and if so, more likely to have been divorced or separated. It is also more probable that his parents were divorced or separated and they tend to be "somewhat disappointed in him." He may consider his health "average" rather than "good," and he gives as his reason for taking the job "security" rather than "experience."

ACKNOWLEDGMENTS

The statistical assistance of Mrs. Jane Olmer, a Red Cross volunteer worker, has been invaluable. Gratitude is also expressed to Mr. Paul A. McDonough and Mr. Joseph M. Lennon of the personnel department of the Veterans Administration, Lyons, N. J.

APPENDIX A

Personal Inventory, Personnel Division—Form I

DO NOT MARK ON THIS BOOKLET

1. In this booklet you will be asked for information about yourself which will help us to assign you to the proper hospital service.

2. When you open the booklet you will see a number of questions, each having two parts, one on the left side of the page, and one on the right side of the page. You must read both sides and decide which one fits you better. For example, the first question is:

	L	*R*
1.	I prefer a job that challenges my ability.	I prefer a job I can do without any difficulty.

After you have made your choice, turn to the answer sheet where you will see numbers beginning with 1, and next to each number are 2 horizontal lines, one under "L," and one under "R." If you choose the answer on the left side, I PREFER A JOB THAT CHALLENGES MY ABILITY, put an "x" in the space under "L."

If you choose the answer on the right side, I PREFER A JOB I CAN DO WITHOUT ANY DIFFICULTY, put an "x" in the space under "R."

In some questions you may find it difficult to choose between the two answers because neither answer fits you exactly. In these cases you *must* choose the one that fits you better than the other. Every question must be answered as you come to it. Do not skip any and do not fill in both spaces for any question.

3. If you make a mistake, be sure to erase completely.

	L	*R*
1.*	I prefer a job that challenges my ability.	I prefer a job I can do without any difficulty.
2.*	Sometimes I am tempted to jump from a high place.	I am not afraid of high places.
3.*	I worry about heart trouble.	I don't worry about my heart.
4.	I've got "guts."	I can be depended on.
5.	I'd like a chance to think without being disturbed.	I prefer being with the boys.
6.*	I enjoy going out with girls.	Girls are not good company.
7.*	I can keep up with my friends in swimming.	I don't swim at all.
8.	My stomach almost never bothers me.	I am often sick to my stomach.
9.	As a boy I had my share of cuts and bruises.	I had my share of dizzy spells as a boy.
10.*	I think my body is in bad shape.	I think I am in pretty good condition.
11.	I wish I could have more responsibility.	I wish I wouldn't worry so much.
12.	I have been arrested because of drinking.	Drinking never got me into any trouble.
13.	I wish I wouldn't have so many ups and downs.	I wish I could make myself talk more.
14.	I have felt bad more from staying up late at night.	I have felt bad more from riding cars, trains and busses.
15.	I have a hard time making friends.	I make friends more easily than the average fellow.
16.	After working hard I feel hungry.	After working hard I feel dizzy.
17.	I wish I could get myself to take more chances.	I wish worrying wouldn't make me sick to my stomach.
18.*	I am reckless.	I am careful.

* Indicates items used in short form of test.

	L	*R*
19.	I repeated three or more grades in school.	This didn't happen to me.
20.	People always misunderstand me.	I get along well with people.
21.	I have more headaches than the average person.	I do not have many headaches.
22.	I can't think straight when I am mad.	I think better when I am mad.
23.	In school I liked to be by myself.	In school I preferred to be with the gang.
24.	Being bossed around gripes me.	A fellow needs a pretty firm boss.
25.	My appetite is good.	My appetite could be better.
26.	I often have a backache or a sharp pain in my side while walking or running.	I never have such aches and pains.
27.	I hardly ever stutter.	I am troubled by stuttering.
28.	One of the reasons I'm here is that the job pays well.	I am here because I couldn't get into anything else.
29.*	I have gone to a doctor or hospital for nervousness.	I was never troubled with nervousness.
30.*	My doctor has told me that I had ulcers of the stomach.	My stomach has always been in good shape.
31.	I have bitten my tongue in my sleep.	I never find my tongue bitten in the morning.
32.*	I have sometimes wet the bed (urinated) since the age of 10.	This never happened to me.
33.	I have enjoyed good health.	I have had my share of backaches, headaches, and stomachaches.
34.	My heart sometimes speeds up for no reason at all.	This never happens to me.
35.	I fall asleep soon after going to bed.	The hours at night seem long.
36.*	I stopped school before I got to high school.	I went to high school.
37.*	My family went its own way pretty much.	My family took part in a lot of events around town.
38.	I sometimes bite my fingernails.	I have not bitten my fingernails in the last five years.
39.*	My father and mother were separated or divorced because they couldn't get along.	My father and mother never were separated (except by death).
40.*	I have walked out of my house in my sleep.	I have never walked in my sleep.
41.	I have had a head injury that knocked me out.	I have never had a serious head injury.
42.	I have been arrested for something other than a traffic violation.	This never happened to me.
43.*	Being in a small closed-in place never bothers me.	I feel uneasy when I am in a small closed-in place.
44.	I am worried about how well I would fit into this job.	I keep thinking about the new experience I am going to have.
45.	If I were a research doctor, I would rather find a cure for cancer.	If I were a research doctor, I would rather find a cure for epilepsy (fits).
46.	I have felt bad more from head cold.	I have felt bad more from dizziness.
47.	I have been sentenced to jail, reform school, or prison.	I have never served time in jail, reform school, or prison.
48.	I usually feel fine in the morning.	I often get up tired in the morning.
49.	Having people kid me makes me mad.	Bumping into something makes me mad.
50.	School didn't bother me more than the next guy.	I left school because I had enough of it.
51.	I was a sensitive kid.	I was a happy-go-lucky kid.
52.	I have been annoyed more by sore throat.	I have been annoyed more from constipation and loose bowels.

	L	*R*
53.	I have had gonorrhea, syphilis, or the clap.	I never had those diseases.
54.*	I have been in one of the armed services—Army, Navy, Marines, or Coast Guard.	I haven't been in any armed service.
55.*	I didn't waste my time hanging around after school.	I spent quite a bit of time in after-school activities.
56.	I graduated from high school.	I stopped before I graduated.
57.	I have suffered more from weak kidneys.	I have suffered more from colds.
58.	My employers were more than fair in their opinion of me.	I think I was a better worker than my employers thought.
59.	When I'm excited or upset I feel sweaty.	When I'm excited or upset I dont show it much.
60.	Nothing ever bothers me.	I have always been somewhat uneasy.
61.	I was once classified as 4F by my draft board.	I was never classified 4F.
62.	I hardly ever stayed away from school because of illness.	I have stayed away from school often because of illness.
63.*	My family is somewhat disappointed in me.	My family is fairly pleased with me.
64.	Most of my friends are luckier than I am.	I have my share of lucky breaks.
65.	I have never gone to a doctor for headaches or dizzy spells.	Headaches and dizzy spells have occasionally brought me to a doctor.
66.	Nightmares never bother me.	As a child I had nightmares.
67.	After working at a job for a while I am ready for a change.	I don't like to change jobs.
68.	I take life easy.	I tend to worry.
69.	I faint often.	I have never fainted.
70.*	I wish I weren't so definite in my opinion.	I wish people wouldn't talk me into doing things.
71.	I was an active child.	I was a sickly child.
72.	I have had a fit, spasm, convulsion or blackout.	I have never had this kind of trouble.
73.	My father worked for more than 8 years on one job or for one company.	My father could not hold a job.
74.*	I have been away summers or for longer periods.	I have never been away from home before.
75.	I like adventure.	Strange people or places make me afraid.
76.	The government should support all veterans since they risked their lives.	Veterans did only their duty and should earn their own living.
77.	I often find it difficult to breathe (asthma).	This never happens to me.
78.	I am scared of going into the water.	I have always enjoyed the water.
79.	Mental patients appreciate special care.	Mental patients are usually not aware of what you do for them.
80.*	Someone in my family has been treated for nervousness.	None of my family has ever gone to a doctor or hospital for nervousness.
81.*	I have never been divorced or separated.	I have been divorced or separated.
82.*	My mother worked outside the home when I was a child.	My mother has never worked outside the home for any length of time.
83.	I have no sisters.	I was raised in a home with girls near my own age.
84.*	I had three or more years of High School.	I did not go to High School for three years.
85.*	My health is average.	My health is good.

APPENDIX B

Name ..... Position .....

	(Last)		(First)					
	L	*R*	*L*	*R*	*L*	*R*	*L*	*R*
1.	×	—	23. —	×	44. —	×	65. ×	—
2.	—	×	24. —	×	45. ×	—	66. ×	—
3.	—	×	25. ×	—	46. ×	—	67. —	×
4.	—	×	26. —	×	47. —	×	68. ×	—
5.	×	—	27. ×	—	48. ×	—	69. —	×
6.*	×	—	28. ×	—	49. —	×	70. ×	—
7.	×	—	29.* —	×	50. ×	—	71. ×	—
8.	×	—	30. —	×	51. —	×	72. —	×
9.	×	—	31. —	×	52. ×	—	73. ×	—
10.*	—	×	32. —	×	53. —	×	74. ×	—
11.	×	—	33. ×	—	54. ×	—	75. ×	—
12.	—	×	34. —	×	55. —	×	76. —	×
13.	—	×	35. ×	—	56. ×	—	77. —	×
14.	—	×	36. —	×	57. —	×	78. —	×
15.	—	×	37. —	×	58. ×	—	79. ×	—
16.	×	—	38. —	×	59. —	×	80. —	×
17.	×	—	39.* —	×	60. ×	—	81.* ×	—
18.*	—	×	40.* —	×	61. —	×	82.* —	×
19.	—	×	41. —	×	62. ×	—	83. —	×
20.	—	×	42. —	×	63.* —	×	84. ×	—
21.	—	×	43. ×	—	64. —	×	85.* —	×
22.	×	—						

* Stop item.

PSYCHIATRIC IMPLICATIONS OF CIVIL DEFENSE[1]

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Modern methods of warfare transfer the brunt of battle to the very doorsteps of the civilian population. This was particularly true in World War II, when certain groups of civilians in strategic areas were subjected to combat conditions and had a significant influence on the outcome of fighting in those and other sectors. In any future war this may well become a universal condition, with the outcome of the entire war hinging upon the civilian's ability to produce and upon his will to resist enemy action(5). The inadequacy of simply reactivating World War II civil defense plans is apparent when one considers the possible effects, including psychological, of such modern weapons as the atomic bomb.

It is the purpose of this paper to indicate *some* of the general problems of psychiatric interest related to civil defense; and to speculate on the contributions which might be made by organized psychiatry and individual psychiatrists in solving these problems. It is not my intention to speculate upon the imminence of war nor upon the need for civil defense, but to look at the psychiatric implications of such civil defense activities as may be necessary.

Preliminary to discussing these psychiatric implications perhaps I should define both "civil defense" and "psychiatry" since these terms have been used to represent a variety of meanings. In speaking of civil defense, I shall have in mind the definition given by former Secretary of Defense Forrestal, namely: "The organized activities of the civil population to minimize the effects of any hostile action and to maintain or restore those facilities essential to civil life that are affected by such hostile action"(9).

In speaking of psychiatry, the definition used by Dr. William C. Menninger will serve our purpose. He states: "Psychiatry is that branch of clinical medicine that concerns itself with diagnosis, treatment, and the prevention of personality disorders" (20). This definition encompasses our professional concern with environmental, interpersonal, and intrapersonal problems which may contribute to personality disorders. By adhering to such a definition, we avoid becoming embroiled with international problems and many other fields of political and social significance. In other words, my remarks relative to civil defense will be based upon the assumption that it is not the responsibility of our profession to attempt to solve all the complex problems of modern living, but rather to deal with their effects upon the individual and to interpret such effects to those who have responsibility for these larger areas.

With this in mind, let us now examine some of the psychiatric and psychological implications of modern warfare The atomic bomb is only one of several unconventional weapons which might be used in a future war, but consideration of its probable effects poses most of the psychiatric and psychological problems we might expect to face. These problems may result from anticipation as well as realization of actual bombing.

Study of the effects of atomic bombing of Hiroshima and Nagasaki gives us a fairly adequate picture of the power of this weapon (38). A hypothetical description of the effect of such a bomb, if detonated over the city of Washington, D. C., is given by Dr. R. E. Lapp, executive director of the Committee on Atomic Energy of the Research and Development Board in an article in the Bulletin of the Atomic Scientists(16). He states that, if a bomb were detonated over the Potomac River, between Highway and Memorial bridges, it would destroy the Pentagon, the Navy and Munitions Buildings, the Treasury, the New State Department Bulding, the Atomic Energy Commission, the buildings of the Department of Interior and the Department of Agriculture. Eight of the city's 24 hospitals would be

[1] Read in the Section on Military Psychiatry at the 105th annual meeting of The American Psychiatric Association, Montreal, Quebec, May 23-27, 1949.

[2] Assistant Director, National Institute of Mental Health.

destroyed. A death toll of approximately 50,000 would include many of the key military and other official personnel of the nation. It is quite possible that all Federal direction and coordination of the war effort and the civil economy would cease to exist.

Since the atomic bombing in Japan produced two types of untoward mass response (17), namely purposeless hyperactivity and apathy, we would be remiss if we did not consider the possibilities of such reactions in this country. Purposeless hyperactivity might result in the abandonment of essential industries and services, the glutting of roads, and the injury of many persons in the stampede to escape. Should apathy be a prevailing response, we might see large numbers of individuals wandering about aimlessly, unable to help themselves or others, adding to the confusion and impeding rescue efforts. Fear, with its attendant panic, might preclude the resumption of organized, constructive activity for weeks and perhaps months.

This defeatist picture is based on the premise that the population has not been adequately prepared to deal with an atomic attack. With proper preparation, both physical and psychological, such disastrous results may be averted.

It is estimated that, with adequate preparation and with only a few moments advance warning, fatalities might be reduced by 20% and casualties by 50% (3). The surviving population would immediately evacuate contaminated areas in an orderly fashion and would begin to restore public health facilities, communications, essential industries, and services.

Attainment of such a result is obviously a challenge not only to organized psychiatry but to many other professions and organizations including civilian governmental agencies at all levels, all branches of the armed forces, key industries and utilities, the Red Cross, and various voluntary organizations.

Psychiatry's responsibilities, however, may perhaps be narrowed down to that of collaboration with allied professions in three basic areas: (1) the prevention of untoward mass reactions, (2) the prevention of individual personality disorders, and (3) the treatment of psychiatric casualties.

At this time we can plan in all three areas, but can act only with respect to the first two. Therefore, I shall confine my speculations to the following question: What can psychiatry and its allied professions, psychology and sociology, contribute to the prevention of untoward mass reactions and to the prevention of individual personality disorders?

We need, first of all, to survey our existing knowledge concerning group dynamics as it relates to the development and control of mass reactions such as panic. This involves not only an appraisal of the exact status of known facts in this field but also of the theories and hypotheses which have been formulated.[3] From such material we may develop new hypotheses which will merit testing. Such basic data will be needed by all psychiatrists who are consulted about the various aspects of civil defense. Organized psychiatry might well review this basic material to be sure it is complete from the psychiatric point of view.

When one considers the limited data at hand it becomes readily apparent that there is urgent need, among others, for more facts relative to the incidence and prevalence of psychiatric disorders, methods of making mass surveys to detect such disorders, and means of predicting how individuals of a given group or the group itself will react to situations of stress. The availability of such data is basic, not only to planning of civil defense, but also to the development of further knowledge essential for the progress of modern psychiatry. Thus any intensification of effort in these areas as the result of a threat to the peace will, in the long run, redound to the benefit of peacetime psychiatry.

Even though the basic survey has not yet been completed, some speculation on possible approaches to the problem of panic prevention is in order. In a panic, individuals or groups of individuals behave in an aimless, unorganized, unreasoning, nonconstruc-

[3] This first step was undertaken independently by Rand (Research and Development) Corporation, a private research organization supported primarily by the Air Force; and by the Committee on Cooperation with Governmental Agencies of the Group for the Advancement of Psychiatry. The findings of these two groups are being pooled so that there will be a single source from which to obtain these data.

tive manner as the result of sudden, extreme, and usually groundless fear. Therefore, one factor in panic prevention must be to provide information so that (1) *groundless* fear does not develop, (2) when well-grounded fear does develop it may be less extreme, and (3) there will be no excuse for unreasonable activity as a result of the absence of basic facts.

To counteract possible unrealistic attitudes of fear and futility, individuals need to be given positive information concerning the effect and particularly the limitations of new weapons. They need to know, for example, that anyone 2 to 3 miles away from the center of an air burst of the type used at Hiroshima will be relatively safe; that, except for the large amount of radiant energy it produces and the relatively greater magnitude of the blast, the effects of this type of bomb are little different from those of a high explosive bomb of conventional type; that only a small percentage of the total casualties will be caused primarily by radiation; and that the residual radiation from such a bomb will not be serious enough to endanger health(44).

However, since it is possible that in a future war atomic bombs would be detonated under water rather than in the air, the people should also be informed about the dangers of residual radiation. They should know that a surface or subsurface burst would create residual radiation of seriously hazardous dimensions but that it can be readily detected with modern instruments and contaminated areas roped off(3).

It is well enough to talk about the need for providing information of a certain type to large numbers of people, but this makes it necessary to consider further how this can be accomplished. The mere acquisition of knowledge is no guarantee that attitudes involved will be realistic or enlightened. Emotional and psychological involvement with facts and plans is as essential as intellectual understanding.

The usual media of mass communication—press, radio, films, etc.—come to mind immediately when we think of ways of informing the public. However, in evaluating the use of such media, we need to keep in mind the fact that the individual has little opportunity to integrate the information thus received with any anxiety which it may engender. He cannot ask questions or voice his doubts and fears to his newspaper, his radio, or the film star on the screen.

Therefore, there needs to be some method by which emotional factors can be resolved at the time they are created so that, at the same time that he acquires his information, the individual will gain some emotional participation with the subject matter. Without minimizing the usefulness of media of mass communication or the need for learning through repeated trials in a simulated situation—a type of experience which in itself may help to reduce anxiety and to produce constructive psychological attitudes—we may well consider a technique familiar to psychiatrists, namely group therapy. It has been suggested that the modifications of patterns of behavior and emotional reactions relative to group situations may be more rapid and permanent if the change occurs in a group rather than through individual therapy(18). It has been demonstrated that the professional group leader is usually able to establish an atmosphere of acceptance and security which diminishes feelings of fear and its sequelæ. The "group" would therefore seem to provide a setting in which necessary factual information can be given to the individual in a way that will enable him to channelize his anxieties constructively.

The need for such a setting becomes readily apparent when one considers how serious feelings of fear and guilt may become. Two illustrations will serve to emphasize this point.

One is the situation which will be faced by workers who will have to remain in the "front line" of vital industries at the risk of losing their lives.

The other situation is that which will arise from the difficulty of providing medical care to the enormous number of casualties. At best, there will be substantial delays in furnishing necessary treatment and it is unlikely that there will be sufficient blood supplies to transfuse all the victims of radiation. The psychiatric implications of this problem, not only as it relates to the patient, but also to his relatives and friends, will be serious(14).

It will be readily apparent that, promising

as group therapy may be as a psychiatric tool, in its present form, it is not yet equal to the task of handling these and other emotionally charged issues on a mass basis.

Within the organization proposed by the Office of Civil Defense Planning, which provides for many types of citizen participation(24), it would be possible to organize groups of 10 to 20 persons and, utilizing group techniques, help them to assimilate material emotionally at the time they received it. A group leader possessing a knowledge of emotional problems could conduct all sessions, calling upon technical specialists and using films to present the subject material. The leader would assist the group in working through its fears and apprehensions and help the individuals to achieve a sense of group participation. These small groups could be united into larger ones for other types of participation in defense activities.

It would be extremely important that groups consist of individuals who would be likely to be together at the time of an incident. It is possible, therefore, that one individual might need to be a member of more than one group. For example, if a bomb were to hit in the evening when the individual was at home, he should have a sense of group participation with his neighbors; if the incident occurred while he was at work, he should have this sense of group participation with persons in the vicinity of his business. In such an event, knowledge of his neighborhood group would give him assurance that everything possible was being done to protect his family.

The selection and training of group leaders would be a very great problem, but it is one for which psychiatrists and clinical psychologists have special competencies. Members of these professions could also serve as group leaders themselves. Other persons who would be well fitted for such leadership are psychiatrically trained nurses, social workers, and other persons with some psychiatric background. Undoubtedly, however, large numbers of specially trained lay persons would also have to be used as leaders, since there would not be sufficient professional personnel. The laymen selected should be persons who have the confidence and respect of those who will form their groups.

In considering what adaptations of group and other psychiatric techniques might be useful, we need to know much more than we do about public attitudes, the extent of the public's existing knowledge of the subject, and similar factors. This suggests the need for obtaining opinion surveys at frequent intervals. Although some surveys have been carried out(7, 35) they do not give us sufficient data for the comprehensive analyses we need to make. In general, they have been based on small samples and do not reflect regional differences which may exist in areas believed to be of military importance as contrasted to less vital areas. A research program in this field should include not only accurate measurements of public attitudes at frequent intervals and in different types of locales, but should also include a study of the basis of such attitudes and their relation to the quantity and kind of information possessed by the individual. We should also try to learn what influence individual traits, convictions, and attitudes on related subjects have upon his reactions(18).

Such data would be helpful in developing improved methods of measuring attitudes. Even more important, these data might assist us in evolving better methods of imparting knowledge in such a way as to obtain emotional and psychological participation on the part of large numbers of individuals. How to do this is the very crux of our problem and only as we solve it can we hope to obtain constructive reactions to situations of extreme stress.

New methods of gaining constructive emotional participation could be tested on small groups and evaluated for their effectiveness in inuring the individuals to situations of stress and in overcoming attitudes of futility which may result from the "one world or none" type of information which has been issued by many persons, who in their justifiable zeal for emphasizing the necessity of building world peace may inadvertently have created fears which would be disastrous in the event war should occur(2, 4, 19).

No matter how well information relative to the limitation of modern weapons, protective measures, and plans of action may be presented it is important that this be accompanied by knowledge of, and participation

in, the organization required to carry out protective measures. This organization will necessarily have to be decentralized to a considerable degree so that units can carry on independently if communications are disrupted(21, 24).

The morale value of extensive citizen participation in the organizational setup was recognized in the preliminary study which resulted in the establishment of the Office of Civil Defense Planning. The published report of the study states: "Full and authoritative information, recognition of the necessity for required action, confidence in efficiency of operation, and in ability to cope with the situation are essential factors in the development of high public morale and consequent public interest and participation(21)."

Timing will be a very important factor in the *initiation* of any program for civil defense because people lose a sense of participation when the situation for which they are preparing does not materialize. Determination of proper timing will be the mutual responsibility of the political, military, and civil authorities, but psychiatrists and psychologists might be called upon for recommendations as to the length of time citizen participation and interest could be sustained.

In order to visualize how some of the suggestions outlined might be incorporated into plans now in progress, it is perhaps pertinent to review some of the organizational steps that have been taken to date.

One step that may prove to be of most importance is the formation of the National Security Resources Board, which was created by the National Security Act of July, 1947, authorizing coordination of military, industrial, and civil mobilization(23). It will be the responsibility of this Board to assay the nation's resources and to recommend to the President measures to correct actual or potential deficiencies in personnel and material so as to protect national security. This Board will probably remain a policy-making agency, with responsibility for actual operations being vested in other bodies. A Medical Services Division, with a physician Director and an Advisory Committee, were established by the Chairman of the National Security Resources Board in May, 1948, and plans and policies of interest to us are already being made.

Another significant agency is the Office of Civil Defense Planning established by the Secretary of Defense in March, 1948. In November, 1948, this Office issued its first basic plan for civil defense entitled "Civil Defense for National Security"(24). This report recommended the creation of a permanent Office of Civil Defense and suggested that one of the four deputies to the Director be a physician who would head a group consisting of the Medical and Health Services Division, the Radiological Defense Division, the Chemical Defense Division, and the Special Weapons Division. The Medical and Health Services Division would deal with medical care services, public health services, and administration. The Public Health Branch, as described in this report, would consist of 10 sections, one of them being Mental Hygiene. In describing the functions of this Section, the report specifically recommended that "in order to avoid possible adverse psychological effects, the Mental Hygiene Section should review bulletins, literature and plans of other sections and divisions of the Civil Defense Organization"(24). Legislation would be required to implement an organization such as that recommended in "Civil Defense for National Security" but an interim organization was set up utilizing existing agencies of government whenever possible. The research phases are being handled by the Special Committee on Civil Defense of the Research and Development Board of the Department of Defense. The operational aspects were in the Office of Civil Defense Planning itself, though the health aspects were handled through personnel in the Public Health Service, Children's Bureau, and Department of Agriculture.

Nongovernmental agencies, such as the Councils of the American Medical Association, and quasi-official agencies, like the Red Cross, will also play an important rôle in national planning and their work must be coordinated into the total plan so that there will be no duplication of effort. All planning at the national level must, of course, be integrated with state and local planning and, at every level, plans should be built upon the

dual principles of self-help and mutual aid (21).

Before concluding, I should like to stress the fundamental premise on which these admittedly incomplete and inconclusive remarks about the psychiatric implications of civil defense have been based. It is ably stated in the report of the President's Advisory Commission on Universal Training: "A strong, united, healthy and informed nation, this is our number one security requirement" (28).

Psychiatry is *only* one of many professions that must help to provide that security. It is important to keep this fact constantly before us so that we avoid actions that might convey the impression that our profession believes it can be "all things to all people." We can make our greatest contribution to national security if we limit our endeavor to areas in which we are particularly qualified to work and refrain from sweeping statements of a pseudo-expert nature relative to activities and policies about which we have no special knowledge.

We can, and must, collaborate with individuals in allied specialties and give and seek advice on those points where we have mutual interests. We can ascertain the special psychiatric problems of our own communities and relate these to the general objectives of a civil defense program. We can make our wishes and recommendations known to organized psychiatry, to organized medicine in general, and to the national and local agencies involved in civil defense planning.

It is definitely our responsibility, through organized psychiatry, to see that psychiatric counsel reaches the National Security Resources Board, the Office of Civil Defense Planning, the existing agencies of government, such as the Army, Navy, and Public Health Service as well as the Council on National Emergency Medical Services of the American Medical Association and state and local planning bodies.

Perhaps the most important thing of all for the individual psychiatrist to do at this time is to begin to formulate ways in which he, and other leaders whom he might help select and train, could assist citizens in his community in assimilating emotionally charged information.

It is hoped that these remarks may be of service in stimulating further exploration of the psychiatric implications of civil defense, so that our profession may do its part in making certain that this country, in time of national emergency, can count upon its most important national resource—an enlightened and responsive citizenry.

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THE PSYCHIATRIST AND THE PSYCHOTIC PSYCHOPATH

A Study in Interpersonal Relations [1]

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This paper, intended to be provocative rather than definitive, was conceived when we reviewed a number of cases diagnosed by several clinicians as "psychosis with psychopathic personality" and discovered an apparent lack of uniformity in the use of the term. As a preliminary experimental step to clarify this situation a simple questionnaire was sent to about 30 of our colleagues requesting a statement of their conception of the term "psychosis with psychopathic personality" as a diagnostic entity. In doing so, we recognized that in the present state of our knowledge it would be extremely difficult to delineate clearly any diagnostic entity whose etiology is obscure and so violently debated. As a second step, a number of cases were reviewed to determine whether the criteria expressed by the clinicians were solely determinant in making the diagnosis. When this review disclosed a number of discrepancies, it was evident that additional factors were involved and an attempt was made to ascertain their nature.

Psychopathic Personality

Before proceeding to a discussion of what might be considered acceptable under the term "psychosis with psychopathic personality," it is desirable to delimit categorically what we consider to be an acceptable concept of the basic condition, namely, "psychopathic personality." It is not our intention to review the plethora of discussions in the literature on this point or to debate the numerous subcategories advanced by various authors(1). The Statistical Manual of 1945 describes "Psychopathic Personality" as follows(2):

> In this group are to be classified those cases that show abnormal reactions essentially of an emotional and volitional nature, apparently on the basis of a constitutional defect, which are not to be classified under the groups already described. Cases of intellectual defect (feeblemindedness) are not to be included in this group.
>
> Psychopathic personalities are characterized largely by emotional immaturity or childishness with marked defects of judgment and without evidence of learning by experience. They are prone to impulsive reaction without consideration of others and to emotional instability with rapid swings from elation to depression often apparently for trivial causes. Special features of individual psychopaths are prominent criminal traits, moral deficiency, vagabondage, and sexual perversions. Intelligence as shown by standard intelligence tests may be normal or superior but on the other hand not infrequently, a borderline intelligence may be present.

Karpman, in "The Myth of the Psychopathic Personality"(3), has shown that none of these diagnostic criteria is particularly pathognomonic of the psychopath. In this and other notable contributions he has emphasized the presence of psychogenic factors in a preponderant number of cases classified as "psychopathic personalities." He believes that only a small percentage of the large group of so-called "psychopaths" represents true or "idiopathic psychopathy." These he calls the "anethopaths" from the "virtual absence of any redeeming social reaction." The large remaining group he would call "symptomatic or secondary psychopathy" and classify them under the proper heading of psychosis or neurosis.

A moment's reflection would indicate that our nosology for conditions in which etiology is nonspecific largely remains on the descriptive and symptomatic level. There would seem to be little real point in separating out a group in which aggressive and predatory behavior is predominant for classification as a distinctly different type of disease process. That the "psychopath" shows quantitative differences in behavior from "neurotics" should not obscure the fact that at the basis is a psychic conflict and analogous psychodynamics.

Pursuing this line of thought still further,

[1] Read at the 105th annual meeting of The American Psychiatric Association, Montreal, Quebec, May 23-27, 1949.

one could say that the psychotic conditions occurring in the so-called "psychosis with psychopathic personality" are essentially no different from psychoses occurring in any other type of mental illness. But what is the actual state of affairs with regard to the use of this diagnosis?

Psychosis with Psychopathic Personality

The Statistical Manual states (2):

> The abnormal reactions which bring psychopathic personalities into the group of psychoses are varied in form but usually of an episodic character. Most prominent are attacks of irritability, excitement, depression, paranoid episodes, transient confused states, etc. True prison psychoses belong in this group.
>
> A psychopathic personality with a manic-depressive attack should be classed in the manic-depressive group and likewise a psychopathic personality with a schizophrenic psychosis should go in the dementia præcox group.

In an effort to determine in how far clinicians agreed with the above-quoted statement, independent opinions were solicited from 30 of our colleagues, many of long experience and varied background. The replies fell generally into 3 categories. Some of those questioned indicated frankly that they had no clear conception of the criteria necessary to establish a diagnosis of "psychosis with psychopathic personality." A second small group advanced carefully reasoned bases for the belief that the diagnosis did not represent an entity and should be dispensed with. The largest group felt that this was a clearly defined entity and in general placed primary emphasis on the acute and transient nature of the psychotic reaction. A few quotations illustrate this point.

> "This term should be applied to an episodic mental disturbance of a transitory character developing rather suddenly on the basis of a long-existing abnormal pattern of behavior (psychopathic personality), in an individual who has been subjected to unusual stress, special frustration, or severe disappointment, characterized by delirium-like reactions, acute dissociation, hallucinatory experiences, stuporous states of varying degrees, attacks of irritability, excitement, depression (with suicidal gestures), transient confused states, paranoid reactions, and episodes which, however, are of mild degree and short duration."
>
> Another clinician states: "Under such circumstances (when frustrated, cornered, when in jail) he may develop acute psychotic manifestations characterized by severe excitement, wild rage, delirium-like and confusional states, panic reactions, hallucinations, and delusions mainly of a paranoid nature. These psychotic episodes are of short duration but may be recurrent."
>
> A third clinician, in part: "In my opinion psychosis with psychopathic personality should be applied to any psychotic state occurring in one known to have definitely a psychopathic personality as defined below. Usually, in my experience, I believe these psychotic episodes have been episodic in nature, usually of brief duration. I personally believe that the qualifying descriptive statements such as manic-depressive reaction, schizophrenic reaction, etc., would be appropriate."

In order to clarify this issue further, the authors have made a study of a number of cases diagnosed "psychosis with psychopathic personality" by a number of senior clinicians at our hospital to determine, if one could, what criteria these clinicians may have had in mind to satisfy the requirements of that diagnosis.

From this study of cases we found that the diagnosis of "psychosis with psychopathic personality" was generally made when there had been some break with reality in an individual who *coincidentally* had a history of antisocial behavior, especially when validated by repeated arrests and confinements, aggressiveness of the predatory type, and a high degree of nuisance value in the hospital. However, in a remarkable number even of these cases, the predominant symptomatology forced the responsible diagnosing clinician to qualify the term with such parenthetical expressions as "schizophrenic reaction type," or "hypomanic and paranoid personality type," and so on.

Our survey demonstrated conclusively to us that in the practical application of diagnosis in individual cases there were factors other than the theoretical criteria indicated above. For one thing, a number of the cases so diagnosed were anything but of acute and transitory nature, a matter which had been described in the opinions as a crucial characteristic of "psychosis with psychopathic personality." For another thing, case after case, by the test of time, had unequivocally demonstrated a classical psychotic formulation other than "psychosis with psychopathic personality." Furthermore, and this is considered one of the crucial points, a number of cases could not accurately be said

to have had a bona fide break with reality but had exhibited an exacerbated degree of extremely troublesome, annoying, and defiant behavior.

The Statistical Manual and many of our colleagues consider the "true prison psychosis" as a quite frequent manifestation of "psychosis with psychopathic personality." A pathognomonic feature of such reactions is their transient nature. By definition they are situational in origin. A number of cases initially diagnosed "psychosis with psychopathic personality, prison reaction" and "prison psychosis" remained psychotic for years, far beyond the maximum expiration dates of their sentences. None of these cases could be differentiated from the usual chronic psychoses.

We concluded that there still existed a discrepancy between theory and practice in the application of diagnosis, and this difference seemed to relate most significantly to factors operating within the psychiatrist.

The Psychiatrist as Participant Observer

The keystone of scientific method is observation. In no branch of science is it as important as in psychiatry to consider and evaluate the observer, his assets, limitations, frailties, and biases. Most important, in the words of the late Harry Stack Sullivan, the psychiatrist is a "participant observer(4)." It is an error to consider the clinical picture that a patient might exhibit *in vacuo*. All behavior is manifested in interpersonal relationships and is subtly or grossly influenced by innumerable factors introduced into the situation of observation by the psychiatrist through the very act of "observing," a process which cannot be without reciprocal effect. A more limited variation of this reciprocal relationship has by some been called transference and counter-transference.

The authors wish to advance a hypothesis that there is a specific reciprocal relationship between the psychiatrist and the "psychopath" which differs importantly from the doctor-patient relationship in other conditions. A nuclear problem in individuals in our social structure is the relationship to, and manner of dealing with, authority. One might contrast the diametrically opposed patterns of this relationship between the psychiatrist and the "psychopath." In the psychopath there is overt defiance and aggression whereas the psychiatrist, in common with most human beings, tends toward compliance and caution with resentment being repressed or subtly manifested in "character" operations. In our therapeutic endeavors we have been impressed with the frequency with which hostility and its economic management is a basic problem, whatever the genetics. The "psychopath" deals with many of his destructive impulses by "acting-out." The dictates of the superego of the psychiatrist may render necessary the development of a reaction-formation against the apparent indifference to superego factors of the "psychopath." It appears likely that the "psychopath" has the capacity to induce a great deal of conscious and unconscious hostility in some psychiatrists which is then rationalized as righteous indignation. Frequently, despite the psychiatrist's best intentions, he may be impelled into attitudes of punitiveness and reprisal which might be irrational to the concept of the "psychopath" as a sick person.

The other facet of this reciprocal relationship is the effect of the psychiatrist or any person in authority upon the "psychopath." In numerous instances the psychiatrist attempts to deal with the psychopath by coercing him into restraint of his impulsive behavior, a process which is well recognized to be no more effective than telling a neurotic patient to "pull himself together and make a man of himself." A vicious circle is created by the ensuing power struggle in which the "psychopath" and psychiatrist frustrate each other. It should be conceded that the "psychopath" is genuinely irritating and that very real annoyance can be experienced in dealing with him. We do not uphold the thesis that the psychiatrist is or can be a superman, but we draw attention to the potential *blind spot* in the clinician which may tend to obscure to him the cogent fact that "psychopaths" are unquestionably ill, and thus he may permit a feeling of vindictiveness and reprisal to be evidenced in his behaving. It is certain that those psychiatrists who have themselves not adequately resolved their problems in relation to authority are all the more prone to engage in ineffective

struggles with "psychopaths." It is, therefore, not always a lack of knowledge with regard to the dynamics of the psychopath that confuses the issue, but ambivalence of the psychiatrist may distort his objective evaluation of psychopathic behavior so as to construe it a variety of obscurely motivated mental illness not comparable to neuroses and psychoses.

Another possible factor contributing to the difficulty in assessing the "psychopath" as a mentally ill person is the fact that the "psychopath" is frequently referred to the psychiatrist only following some misdeed, antisocial or delinquent behavior. To continue the aspect of the reciprocal relationship, in such instances, the "psychopath" is usually an unwilling patient and may be consciously motivated by self-serving needs. Confronted with a person accused of some antisocial act, a person highly manipulative, hostile, or ingratiating, the psychiatrist may unwittingly become in turn an "unwilling doctor." It is not beyond possibility that he may be suspicious of the patient to the detriment of his own function as a physician, counter hostility with hostility, and focus upon the crime rather than upon the criminal.

In addition, one may suspect that a psychiatrist keenly aware of his social responsibilities may be subtly influenced by considerations that Roscoe Pound has stated: "It is not only important that justice be done but that the public believes that justice has been done." In consideration of all these factors there understandably might be some reluctance on the part of the psychiatrist to make a diagnosis which might permit an individual to escape punishment for a crime he has committed and for which he may be under charges, particularly if the crime was a sensational one and attracted much public attention.

In this connection, it is our desire to make clear our attitude with regard to the confusion which is introduced when the psychiatrist attempts to equate his knowledge with regard to psychodynamics to the social obligation he assumes as a psychiatrist in the community. Our emphasis on "psychopathy" as a variety of psychosis or neurosis should not be construed to imply that we believe that it is equivalent to a determination of criminal irresponsibility by reason of insanity. To do so is to fall in with the legal way of thinking about complex human beings as if they were at every instant either wholly responsible or wholly irresponsible. There is the further complication that, because of the antiquated machinery of the courts, if an individual is held to be not responsible for a particular crime, he only too frequently is released for further predatory operations in society without treatment being made mandatory. It is our firm conviction that many of these individuals must be incarcerated for the protection of the community and treated until such time as they, with reasonable safety, can be released. This is again to emphasize that they are a medical as well as a legal problem. Such a provision would lessen any misgivings on the part of the psychiatrist who must integrate his clinical judgment and his feelings of social responsibility.

Summary

We have been, for some time, perturbed by the extraordinary looseness with which the term "psychosis with psychopathic personality" seems to be applied. A study of written opinions solicited from a number of colleagues when contrasted with a number of cases so diagnosed disclosed discrepancies between theory and practice. It is our opinion that these discrepancies are due to factors operating within the psychiatrist in his rôle of "participant observer." This problem of the psychiatrist is intensified by the present nosological confusion. We believe that it is more handicapping than helpful at this time to consider "psychopathic personality" and "psychosis with psychopathic personality" as distinct entities rather than as varieties of the conventional neuroses and psychoses.

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DISCUSSION

DR. HERVEY CLECKLEY (Augusta, Ga.).—I agree with the authors that neither "Psychosis with Psychopathic Personality" nor "Psychopathic Personality" itself is sufficiently delineated in our official standard of classification to constitute a distinguishable entity. The descriptive terms quoted from The Statistical Manual as characteristic of "Psychopathic Personality" apply to a rather large group of disorders that do not have enough in common to be forced into a single category. If we insist on such a grouping we find that no single clinical description can be given that is of practical value in defining the heterogeneous entities listed therein.

Unlike Karpman, whose valuable contributions are pointed out, I do not believe that the essential point lies in distinguishing between a small group of character and behavior disorders presumably inborn and a much larger group that can be properly fitted into the familiar categories of psychoneurosis or psychosis. The evidence brought out by Dr. Karpman and others of psychogenic factors in maladjusted behavior of the sort usually termed psychopathic is pertinent indeed. I cannot, however, follow him in the assumption that, when he or any other investigator does not succeed in finding basic conflict and a dynamic pattern behind the pathologic behavior, such factors can be regarded as nonexistent. There are many cases of schizophrenia and of obsessive- compulsive disorder in which important causal factors can be brought out. There are other cases in which investigation is not similarly rewarding. But we do not presume the absence of such factors. It seems to be not unlikely that in all the character and behavior disorders influences of the type we call psychogenic play an important part, however much or little inborn predisposition or other "organic" factors may also contribute.

Among the various patterns of maladjustment lumped under the psychopathic personality category one important reaction type can without great difficulty be distinguished and described. This disorder, plainly and consistently demonstrated in the behavior of the subject, varies in degree, like other psychiatric disorders, and constitutes as clear-cut a clinical entity as any for which we have a diagnostic term.

I do not believe this group of patients fits very well as a subtype under the psychoneuroses, with anxiety state, hysteria, etc. From a practical point of view they differ from the psychoneurotic in that they bring disorder in the community and damage to themselves and others. Like those we classify as psychotic they cannot be safely left to their own devices and decisions. However authorities may differ in assessing their moral culpability, it is hard to see how any psychiatrist could fail to recognize a seriously diminished competence and a major disability for social adjustment. Granting that there is as much evidence for unconscious motivation as in cases with anxiety, conversion, or obsessions, it nevertheless seems reasonable to distinguish sharply a dynamic pattern that leads to the acting out of a conflict from patterns that lead to subjective disabilities and disturbances only.

Dr. Cruvant and Dr. Yochelson do not feel there is any distinct disorder deserving the term psychosis with psychopathic personality. I am not sure that there is much more need for such a term than for "psychosis with red-hair" or "neurosis with Ph. D. degree." The transient confusional states considered by some as a characteristic reaction of psychopaths to imprisonment are in my opinion usually minor complications of the very serious, incapacitating disorder that is fundamental. I would compare such manifestations with those of a profoundly schizophrenic patient who by chance also develops D.T.'s.

I am glad the authors have devoted their attention to the "blind spot" that psychiatrists often show in their attitude toward the psychopath (so-called). It has handicapped our profession in its efforts to evaluate the psychopath and contribute something useful to social and legal agencies which are still without facilities to handle these obviously disordered and sometimes very dangerous people.

It seems doubtful that substantial progress can be made with this urgent problem until psychiatry can bring itself to admit clearly and unequivocally that psychopaths are unquestionably ill. Such an attitude should not lead to more laxity in protecting society against felonies and other damaging acts. It should, on the contrary, open the way for adequate protection against disordered persons who cannot now be controlled by any means until after serious and sometimes tragic antisocial acts have been committed.

ART AS PSYCHOTHERAPY

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The philosophic and aesthetic approaches which I brought to the use of art with the mentally ill came out of a hitherto undirected feeling for people and my maturing years as an artist. The uses of art with the patients and my deductions have developed through six years of work at Saint Elizabeths Hospital in Washington.

I came to this art therapy without previous psychiatric training, only with a certain sensitivity to people and an amoral interest in humanity; with the knowledge that recovery in mental illness needs supporting activities that encourage independence, not just occupation. In dealing with patients I knew only that one took what happened without showing surprise and that one did not try to force an interest. One furnished a means and hoped for a response.

My first concern was with the individual and his creative expression in its relationship to his total way of living, not merely as an art production or as a revelation of psychic material. As I have not at any time in my own creative life considered art as a means of escape I did not bring that rarely sublime and often sentimental approach. On the contrary it was the use of creative expression as an interest in the objective world and conscious production, a development of the coordination of the seeing eye and the re-creating hand which made art seem valuable for the mentally ill. There were the factors of line and form perception, scale, relationships, selection, expressive handling, color, design, all to be integrated as well as possible. These are too large, too formal words to cover much of the work done and they are not always used directly with the patients. But these factors do represent the aesthetic and philosophic bases of my approach.

I must admit to having such a low opinion of the too eager interpreters, the glib symbolists, and of the sentimental excesses of the emotional release school of art, especially as irresponsibly described in the press, that I wondered if I weren't guilty of overvaluing objective and conscious expression. However, at no time have I interfered with free expression beyond some attempts to test the patient's readiness to accept the world that confronted him.

This approach was readily applicable to many of the patients in recovery from brief acute psychoses, the war casualties of 1943, with whom I first worked. But the peacetime settling to a greater proportion of long-term and more profoundly ill patients lessened this objective use and increased the amount of spontaneous and subjective expression.

These opposite forms of expression, the objective and subjective, indicate the two major approaches to the use of art in mental illness. The first, objectivity, is the patient's recognition of actuality, his material surroundings, and on it his creative expression is developed consciously with whatever art instruction he can accept and with whatever larger implications of the sense of order inherent in art can be suggested.

The second, subjectivity, is the spontaneous, untutored use of art to express feelings, ideas, fantasies, the release of emotion through literal representation or through symbols. The autonomy of this form of expression does not altogether exclude the possibility of reaching the patient on a conscious use of his means. On the other hand a patient's re-creation of things around him, for instance a still life, can be so refracted by his personality that it becomes more subjective and little directional contact can be established. As these two forms of expression often intermingle, they are also often interchangeable and both will be used as a patient is more or less in contact.

As those I worked with first in the art and music sessions were mainly recovering from acute psychotic states the expression was predominantly objective. The purpose of these weekly sessions in a building removed from the wards was to give the patients really interested in art and good music an agreeable and unhospital afternoon at those interests. They have also served a valuable function, especially with the short-

term patients, as a social stepping stone to everyday living. Even those participants who are profoundly ill are quiet and agreeable, able to be part of an ordinary social occasion.

Except for the supervisor, the several workers were volunteers and they brought a sense of outside daily life which is to me one of the most valuable therapeutic qualities a worker can bring. This sense of outside immediately lifts above the hospital routine and the greater the worker's range of experience in work, interests, and travel, the broader his activities and acquaintance, the more points of contact he has for establishing a quick, a more intimate, and significant rapport with the patients. This can be done with a warmth and friendliness that is subtle in direction, spontaneous and yet detached. It is a quality of outside that carries none of the fetters and prejudices that may exist in the family situation.

I was fairly sure that these patients in their last weeks before discharge would in their quest for security and absolute answers, a black-and-white sense of wrong and right, of insane and sane, be inclined to work realistically. The first weeks confirmed this and attempts to encourage subjective expression met with less success and even with resistance.

To support this more objective interest there has always been some subject for these sessions, a still life, a model, flowers. But there has never been any compulsion to work from this subject. A person is free to do any kind of work he wishes in any medium. Nor has there been any formal or group instruction. Each person has been met as an individual and we have gone through a feeling-out process that has sometimes required several weeks to disclose what the previous experience has been and what the present situation indicates.

From the first I try to get the patient to make decisions no matter how slow the process has to be or how gently his attempts at dependence may have to be thrown back to him. "Would you like to do some idea of your own or work from the still life?" "Here are the papers. Would you like white or a color?" If he says, "You choose for me," the answer is, "No, it's your party and I might not choose what you would like."

The first sessions often result in only a few timorous lines which have taken the whole time to accomplish and even then sometimes with an effort and sense of inadequacy that have brought tears. A tiring patient will be encouraged for what he has done and made to feel free to rest, to become more familiar with the place, have a smoke, or just listen to the music.

As the rapport and accomplishment improve more suggestions can be made. An unassertive person is encouraged to work larger, not to fear a goodsized piece of paper. An overexact, tense person is asked to try for a more generous, free-flowing line and is told that literal perfection is secondary to the spirit and essence in both the object and oneself. Obviously the change from an inhibited line to an expansive one is relaxing and can stimulate a feeling of outgoingness. Another suggestion is that an overactive person use his work as a means of pegging down, to attempt some consideration in it rather than to use it as a means of acceleration.

Along with these psychic factors in which art is a medium more than an end in itself there is given whatever art instruction is indicated, from the most elementary level to instruction for advanced pupils. Whatever level, the fundamentals of perception, scale, form, rhythm, the function of design, etc., are suggested. Getting someone to see for himself, to comprehend relationships and then project them through the hand is one of the most integrating experiences to be had and it gives a great sense of achievement.

Taste cannot be changed from bad to good in a short time and there is little to be accomplished in putting a patient's taste insecurely out of joint with his milieu or in thwarting his desire for expression by stressing unwarranted standards. Attempts can be made at improvement and that may be done through encouraging or discouraging what is chosen for copying. However distasteful the idea of copying may be one has to admit on aesthetic grounds that the greatest artists have spent years at it and on therapeutic grounds that some patients do not have the confidence to make an original effort. Equally good comment can be given over copying. It is a matter of what and how.

Thus, while copying is justified, individual expression is encouraged from the first. After a few sessions of copying a patient may gain the confidence as well as the grasp of his own ideas to start an original work. He is asked to put down whatever comes to him, anything, even if only areas of color. Attempts may be made later to instill certain principles which will give a more capable handling, one that can discover for itself and give an individual expression of a subject rather than a stereotyped or superficially literal representation. We once had an exhibit of the 12 drawings made from a still life and so great were their differences we had no certainty that the still life itself was reality.

The subjects set up for the weekly sessions have not been made easy. Rather they are composed to interest the more capable and to be something for the others to stretch up to. If a patient shies at the difficulty it is suggested that he do what he can from it, take whatever part appeals. As our specific circumstance and the problem peculiar to teaching an adult—that he knows what others can do and what he would like to achieve himself, very inhibiting knowledge—preclude the most elementary teaching of forms, the problem is to get the patient to see the basic forms in fairly complex material, to get him to look for form and character rather than photographic detail.

The still lifes are composed to a pleasant sense of living through colors, textures, and associations that are fresh and generous, unaffected, and not labored or banal.

This consciously constructive use of art has been the distinction of the art and music sessions. As I wrote in the foreword to an exhibit of the patients' work at the District of Columbia Central Public Library in 1944 . . . . "the fantastic or disorganized, insecure work of the ill becomes stronger in organization and usually more representational as the mental health improves. When the patient's reclamation of 'reality' has been made he may continue to work creatively as a realist, but if he does go on to work subjectively, from recollection or fantasy, the fantasy will be anchored in his regained security."

When I came to this work I had no illusion that art was a panacea unlimited. I was also aware of the vast popular indifference to art. My own experience had taught me about the anxieties and tensions that creative expression can develop. But in the first months I learned even further that art could have negative results.

I soon saw how indiscriminate good intentions could cause havoc, and I shall not forget one especially talented young man who, after years of an unexpressed hankering, was beginning to find his way in the weekly art sessions. As his ability grew others became interested in him and requested posters and other work. An enthusiastic pressure to do things came from all sides and he began to go into a manic phase. His schemes came to include all the arts and by the time I tried to brake him down he was uncontrollable. The sickness ran its course to depression and a suicide attempt and then a very slow recovery. I have since been assured that the acceleration would have come anyhow and that art was only the agent. Unfortunately it was the worst possible agent and had his interest not been overcharged in it perhaps some other less important thing would have served. As it was he blamed the art work and though, after much talking it over, he tried a little again he said it meant too much to him. It upset him.

Art is not a cure for everyone and I think it is needless to claim it is for any great number. It is an important help for those who want it or awaken to it. As the hospital is a microcosm of general life so the percentage of those interested runs about the same.

The desire for it must come from the patient and the activity is meaningless if not negative unless it does. While a person is encouraged to do as good a job as possible this is not put as an external compulsion, but indirectly to cause his own recognition of the disciplines of a good job and the inner satisfaction in achievement which is beyond the initial pleasures.

Some who have been students or professional artists have an extra resistance to art work when ill, and as art may have been a factor in the illness this refusal is self-protective and should be respected until the patient finds his own readiness. The possibility may be offered but without urging.

Some of my least satisfactory relationships have been with very talented or professional people who mistrusted my interest or felt rivalry or aesthetic differences to a damaging degree. To these and any others who wish to work out their ideas without suggestion I gladly hand the supplies wanted and let them indicate the degree of our relationship. A more complex situation is to try to keep a patient who is wavering between contact and deeper illness from using art wholly as an escape. One tries, by discussing the work more technically than symbolically, to encourage the consciousness in the effort. The emotional significance is respected and gone into as far as the patient wishes but it is not emphasized by the therapist. This is further complicated by the fact that the more delusional-escapist work is often aesthetically as well as clinically more interesting. Whatever can be is encouraged but at such a time therapy should out-rank taste and one's own delight and curiosity. Of course in deeper sickness there is nothing to do but see what the production is.

I had regretted that my associations over the art and music sessions were often too brief to help as much as they might, to plant the ideas firmly enough to become a working principle. I had felt the need of meeting the people on the wards and knowing them a longer time. My becoming a member of the Red Cross staff in 1945 enabled me to do this and since then my ward work has been with the convalescent and chronic, the quiet and disturbed, the depressed, with children and criminals. In January 1948 I became one of the psychotherapy department staff.

To these wards I carry a shawl strap with beaver board drawing boards, a quantity of different papers, an envelope of 11 x 14 photographs of American types, places, and activities; in my other hand a kit of pastels, watercolors, pencils, charcoal, and erasers. I enter the dayroom and put my materials in some convenient place and start to ready them for whoever wishes to work. I take the dayroom as it is, card games, ping pong, radio, etc. Materials are given out as the people come up for them. When the first are cared for I visit with new people or re-approach familiar ones. Patients come from other wards by call or by referral and the session consequently serves more wards than the one on which it is taking place. Others than those actually working show interest and a new kind of life is brought to the dayroom. For this reason I have preferred not to take the patients to a special room. While the noise and crowdedness often make our work against odds I still believe the benefit is generally greater from having the session in the dayroom. Surely some of the artist patients would be more comfortable and perhaps do better work removed from these drawbacks; but while I do not want to rationalise a vice to a virtue, I think there is some toughening in working under such conditions and I admire the acceptance of the situation. It is what one often gets in art schools and in out-door sketching. Working in the dayroom does add a definite social sense and encourages more friendly interplay between the patients. Too, there are many who become interested through seeing others work or in looking at the photographs. These photographs also enable me to start associations more easily. The activity and the photographs have been a pleasure to the two rows of elderly wheelchair patients on a women's ward. Some have even roused to drawing. On the wards art is sometimes a first activity when verbal or other direct contacts are still guarded against. It will be first a private activity, then shared with me, and then more with others on the ward.

Art is a medium for a more significant association. Although I don't like to use so frigid a metaphor for anything as warm and friendly, the art work is only the visible ninth of the iceberg. It is a means for a patient to enjoy himself as one would at any recreation, but some of the most helpful relationships have been in cases where little or no drawing was done or where drawing was the opener and was dropped as the real significance of the relationship was established, through congenial interests or something generally or specifically beneficial. The same philosophy of seeing for oneself and finding one's own solutions is used for personal problems, the acceptance of actuality, and one's handling of it.

Partly because the patient is thrown more completely on his own in the ward sessions there is more personal expression and as these patients are predominantly in long-term

psychoses there is more spontaneous expression.

I am often asked about the relationship of the work to various kinds of illness, how much one can diagnose. Others have gone much further into this than I, a field I have been especially slow and humble about, and I shall give only some broad classifications.

The cyclothymic work has a certain hard exactitude to it and ranges from bright to morbid color dependent on high or low mood. When very high the intensity becomes too great for clear handling either in drawing or color and when very low it is again confused but dully and messily so. In a broad middle range the work is generally objective and in its exactitude akin to the very exact work of the long-term paranoid. This is a definite delineation that is so literal and restricted it will allow no interpretation other than its creator's. Paranoids more generally out of contact, not just in their persecutory delusions, will work more in the scattered, unsubstantial way of the schizophrenic. There is something I like to call feathery about the work of many schizophrenics. Even if the drawing is from life it will have an indeterminate quality with distorted relationships, though all of this may be instinctively good in color and design. The hebephrenic carries this even further to a lighthearted and often abstract expression. There are too the strong colors and angles, or violent action that show hostility, the primitive images of the deeply regressed schizophrenic. The catatonic will represent with a few scribbles or in cosmic symbols.

As I have seen something of everything from all kinds of patients I have few notions about the use of color and I think this is a field very subject to circumstance. Perhaps more significant uses of color might be noted when the range of the palette is limited but I offer a palette of 12 watercolors and oils or 48 pastels and I have found no limitations in the use of color. The schizophrenic's use of color is often brilliant and good and some enjoy making geometric color patterns. In an Easter egg dyeing, given 6 colors, 3 psychotic children finished with highly indicative color schemes in their baskets, a well-balanced variety in the best case; a predominantly red lot for an aggressive boy; morbid yellows, greens, and blues for the sickest child. A point in common with Rorschach findings in schizophrenia is that there is often an isolated and unique element, usually small.

The character of the work can also be a good barometer of the patient's feelings, and disturbances have been evident in the work before they have shown in behavior. While the spontaneous, freely expressive work is more arresting and exotic, more inviting to interpretation, the representational work in its selection, organization, and handling is no less revealing of a person's character and difficulties.

As I believe that all apparently universal symbols are subject to special deviations, I cannot believe that anything better than a tentative interpretation can be made without knowing what it means to the patient and the particular references to which he is subject. On this score I incline to strictness and say that the amount of *original* diagnostically revealing material is small. There is a great deal that is corroborative and that can furnish matter for discussion with or about the patient. Creative expression is an intensely individual process and so complex in its subtleties and contradictions, its influences from external circumstances, if one examines it beyond the crude, frequently arbitrary or fashionable generalizations, that it seems better to consider the individual developments rather than to try to draw conclusions. Even a scientific approach is not free from these prejudices.

As there is an unauthoritarian intimacy in my relationship with the patients I have been especially careful to respect their feelings in the probing and exploitation of their work. There is a respect for the patient's reticence to be preserved, part of which can be to discourage that kind of exhibitionism which sometimes develops under analytic revelation. And yet the work should be available to members of the staff. With the longer-term civilian patients it has been easier to justify the doctors' interest as reasonable and friendly rather than officially investigatory. An unfortunate violation of this can damage the relationship with other patients than the one concerned. No small amount of my value would go if I became known as an art stool pigeon.

In my emphasis on the conscious rather than the interpretive aspects I do not wish

to seem guilty of aiding the patients to cover over what should be uncovered, faced, and worked out. I believe in the interpretive values but feel there are few really qualified interpreters and that unless interpretation can be handled responsibly as a part of intensive psychotherapy it is best kept at a minimum and at a distance from the patients.

Creative expression, as stated earlier, is an intensely individual act and while it can be used as a group enterprise its essential satisfaction remains personal. The patient should be encouraged to work out his own ideas and feelings in the ways that come naturally, whether consciously or unconsciously. It is only after a good relationship has been established that other developments may be suggested and then only tentatively. Otherwise you may get results from your suggestion or request that are obligingly full of symbolism but no more real to the patient than the psychiatric patter with which some think they have gained insight but with which they have really sealed it off.

It is as risky to overload a talented patient with a too enthusiastic response as it is to overstimulate a schoolchild. Relatives, too, in their anxiety for improvement are apt to overurge an activity and so cause resistance. For the therapist a responsive pupil is strong drink and the delirium of being a good teacher can quickly set in. When this is added to by too much enthusiasm from other patients, nurses, doctors, the accumulation can confuse the approach and overcharge the interest. The art therapist must hold a check on this as best he can, indicating his own enthusiasm and yet holding reservations that hope not to alienate the patient and send him to the easier and less discriminating responses.

It is better for even the quite talented to consider art as an avocational interest, as the rigors and hazards of professional art life are too great for perhaps even 1% of the recovered to undertake a full competitive art career. It is both healthier and more honest not to encourage this overoptimistic expectancy from the work.

An essential honesty is the only policy. The patients in their hypersensitivity and idleness often become connoisseurs in human behavior, and they will have seen through you several times before you have much idea of the kind of person you are projecting. Each patient should be accepted good-naturedly and simply on his own level. He should be encouragingly criticised and not too effusively praised at that level. There are times when candor is needed to challenge questionable ideas and I have found that a friendly frankness wins a more respectful response. Flattery is suspect.

Creative expression is primarily a pleasure but not necessarily a superficial or insignificant one. The approach and conversation around a work do not need to be so inadequate as the production. A pastel copy of a Cezanne that took two years inspired almost a course in 19th century French and contemporary painting as well as a discussion of the person's work habits and their relationship to his problems.

Just as the spirit behind the therapist's work should be warm, honest, and lifting without being prejudiced or meager, the quality of the materials has an important place. Good materials and a generous feeling about them are important to the success of the work and the patient's respect for his effort. He is encouraged to feel the work is his. If the patient is guided either directly or indirectly to realize how much he can do for himself rather than being made to feel how much the therapist is doing for him there can be a very warm and close association without creating that dependence which is spoken of as the bugaboo of psychotherapeutic associations. There is a way of underplaying the patient, of encouraging his ego over the therapist's authority, that does not need to lessen the respect for the therapist or mean any loss of real dignity.

Though I spoke earlier of an amoral interest in humanity the Puritan ancestors I am fugitive from do not allow me to be entirely without a morality! It is a morality of common sense rather than convention and a creative morality or integrity that considers art a positive and civilising thing, not a means of exploiting the warped and negative in one's nature. Art is sometimes the affirmative manifestation of an otherwise maladjusted nature. This does not restrict art to the pastoral chromo, the "sanely" representational. It does not restrict art at all. It means an art that comes from perception and feeling brought to a balanced expression

and it is in this sense of integration with its larger implication of order in living that I think creative expression has a particular value for the mentally ill.

A work that is based on nuances, sensitive explorations, casualness, the particular incident, and a lenient philosophy is hard to generalize briefly. But the ultimate purpose is to instill in the patient an awareness that creative expression is a positive and pleasurable part of living that is not without its challenging disciplines. It is not techniques and styles but the matter of taking in significant sensation and re-creating it, in a sense, in one's own image and likeness. This is the timeless essence of the creative experience and the base from which one can go in any direction.

Yet this timeless essence, which should be common knowledge, is the quality which people need most to be reminded of, so far have we let methods and technically determined results become the matter of news and criteria. To work only by theories and techniques without the experience of this fundamental creative sense, whatever the means of expression, is to carry one's specialization on stilts.

It is in this use of the sensual, the intellectual, and the emotional or spiritual that one recognizes for himself the fusion and use of the whole person and the significance of the creative experience. It has little to do with the self-expression cliché.

Along with those in the art sessions who are "only playing" or who are sonnambulistically working out some private matter, it is rewarding to see those patients who discover this highest potential in art therapy and begin to build on it.

SCULPTURE AND DEPRESSION

A Psychiatric Study of the Life and Productions of a Depressed Sculptress

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Although studies of the prose, poetry, and paintings of psychotic patients are common in the psychiatric literature, correlative investigations of sculpture and personality are unusual. Because such writings as exist are unavailable in readily accessible publications written in English, brief résumés are included in this manuscript.

Several authors have reported their observations on collections of plastic productions of psychotic patients:

Réja(16) described such objects collected from various French psychiatrists. He found that as a rule these works simulated primitive art forms and were stylized in nature of construction.

Ernst(4) discussed the works of psychotic and feeble-minded criminals who ingeniously utilized wet paper, flour paste, bread, and bits of wire to produce crude common objects, such as animals and pipes.

Vié and Quéron(22) delineated the plastic productions of a miscellaneous group of patients in the "family colony" of Ainay-le-Château, individuals who had made satisfactory, simple adjustments as farmers, woodcutters, and performers of menial chores about the houses of the peasants who kept them. They included patients afflicted with feeble-mindedness, senile dementia, infantile paralysis, and arteriosclerosis and a few cases of schizophrenia and paresis. These productions were simple and unimaginative. They lacked fantastic qualities often seen in psychotic art.

Vaux(21) described spontaneous art creations of patients in a state asylum. The amateur sculptors made large numbers of objects, many being grotesque and ingenious. Individual patients were found to repeatedly use certain symbols in their productions, such as faces, numbers, and stars. Various materials were employed, including wood, metal, twigs, yarn, paper, wax, and soap. Meticulous, markedly careful work was performed on objects of no apparent value, producing ridiculous designs of worthless materials. Various themes were recurrent; sex, religions, and battle predominated.

Ducoste(3) depicted a similar collection and attempted to correlate the natures of the objects with the types of psychoses of the patients who produced them. He found that simple dements produced crude, useful objects, paranoid patients made weapons, and certain paranoids, alcoholics, and epileptics produced objects through the use of which they could hope to escape.

A few authors have described the spontaneous productions of individual psychotic patients who had no previous special training in artistic fields:

Villamil(23) reported the case of an alcoholic manic Spanish farmer who had had "limited education." This patient skillfully executed a large series of wood carvings during the acute phase of his mania. They were strongly religious in character, and Villamil found them to contain numerous Egyptian, Persian, and Catholic symbols. As the mania waned, the farmer's creations lost their artistic nature and became progressively more utilitarian. As he neared recovery, the patient requested to be allowed to do carpentry and to farm. When he was confronted with his prior carvings, he doubted that he had made them. The author presented a Jungian interpretation of the sculptures and claimed that the religious symbols were products of the farmer's "archaic unconscious." Anastasi and Foley (1) felt perhaps Villamil may have read the symbolism into the products and that the Catholic symbols were explicable by the patient's religious associations.

Morselli(13) wrote of a 33-year-old paranoid schizophrenic carpenter and cabinetmaker. After this man was hospitalized he continuously carved stylized "trophies" with

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coats of arms, armor, and varied emblematic figures. The symbols used were found to have special significance for the artist. A cigar which was held in a slanting position in the mouth meant contempt for kings and tyrants.

Hospital(7) described a wooden panel which had been carved by a painter who suffered a melancholic and hypochondriac condition. The panel was done in bas-relief and was performed with great skill, although certain distortions of perspective and proportion were noted. It resembled the bas-reliefs to be found in medieval abbeys and its subject matter was the care of the insane by the monks.

There are a few case reports in which the plastic works of psychotic professional artists and artisans are described:

Prinzhorn(15) delineated in detail the case of a paranoid schizophrenic who had been a builder, decorator, and maker of iron castings, and who had had a hobby of constructing dolls for his children. During his hospitalization he made figurines of bread and whitewash and carved many statuettes and relief-forms from wood. These objects were fairly stereotyped and frequently portrayed fantastic and grotesque combinations of the intermixed features of animals and men or representations of men or animals alone. There were inconsistencies and disproportions but his work was skillful. It resembled certain primitive art forms. Religious and sexual themes were included, and certain figures had distorted sexual organs.

Stärcke(20) described "about 40" sketches and models which had been made by a hebephrenic sculptor during his period of commitment. Representations of men and various animals predominated. Portrayals of the head of Christ were included. Stärcke attributed sexual symbolism to the products.

Osario and Monteiro(14) reported the history of a paranoid schizophrenic Portuguese sculptor and gave an analysis of his drawings and plastic works. The patient had been a fervently religious Catholic and much Catholic symbolism was apparent.

Kris(10) reported a thorough study of the life of Franz Xavier Messerschmidt, a 17th century sculptor, and a series of "character heads" which he had skillfully executed while he was becoming paranoid. Kris considered the products to represent the sculptor's portrayal of his varied moods and his attempt to retain sanity.

Laignel-Lavastine(11, 12) and Vinchon (26) discussed the case of a 46-year-old sculptress who had a psychotic episode characterized by a suicidal attempt, hallucinations, religious mysticism, and spiritualism. This woman determined to do a bust of the Virgin of the Redemption. She went into a trance during which she made the statue in what seemed to be an automatic manner. She said her arm felt as though it were guided from external forces. The bust was unlike her usual work, and resembled Gothic and Florentine Renaissance religious figures. When she later examined the statue she was surprised and found herself unable to complete the product with ease of movement and ideation.

A large number of authors have described the paintings of psychotics. The writings of Seglas(19), Hrdlička(8), Dantas(2), Rogues de Fursac(18), and Prinzhorn(15) are representative. Writers generally concede that the artistic creations of psychotics are of inferior quality and usually worthless as works of art. There are some notable exceptions to this generalization, and Réja (16, 17) states that some patients who have had artistic training prior to their psychoses do work revealing greater talent and of more artistic value after they have become insane. It is found that paranoid and chronically manic patients produce the majority of paintings and the works with the greatest artistic value. The characteristics of the illnesses are portrayed: mystic, religious, and erotic symbols are present in profusion; fantastic and grotesque productions with repetitive patterns and themes, and stylized and stereotyped forms are assumed. Primitivism is seen. Perspective and coherence suffer. In demented patients and those of meager intelligence, nonsensical and disorganized or common, unimaginative productions are the rule. Perseveration and absurdities are frequently noted. Very little is written concerning the spontaneous drawings of depressive patients. Karpov(9) found "the mechanism of creative ability in

its fullest development" in manic-depressive psychotics, and cited paintings "of considerable artistic merit." He found that depressive patients used darker pigments and were less productive than others. He did not find in their products the bizarre characteristics described as occurring in schizophrenics. Vinchon(24, 25) said that depressed patients rarely draw.

The similarities between the graphic and plastic art productions of psychotic patients are amply demonstrated. It is particularly noteworthy that the creations of depressed patients usually portray reality in a doleful way and with fair perspective and coherence.

The present manuscript is written in an attempt to correlate the life and psychotherapeutic course and the sculpture of a professional sculptress who suffered a psychotic depression. The history is unavoidably and regrettably incomplete. It concerns an artist whose endeavors encompass poetry, painting, ceramics, and sculpture. The material included in this article will be limited principally to a simultaneous appraisal of her personality and sculpture.

E. W., a 57-year-old woman, first interviewed January 14, 1947, complained of fatigue and depression of 2½ years' duration. She said her depression began with the death of her husband, immediately following which she discontinued her heavy social activities and became a recluse. She felt almost unbearably depressed and seriously contemplated suicide. She refused to accept her husband's death as reality. She became restless, insomniac, and anorexic, and lost an undetermined amount of weight. She ceased dreaming. She read in a desultory manner, traveled from one city to another, slept in her clothes in her car or on the ocean beach, and lost interest in her personal appearance and property. After a few months she resumed sculpture and ceramics. She lived with her old dog in a dirty studio, and, although she had no need for the money, leased her desirable houses. In the autumn of 1946 she withdrew completely from society and refused to leave her studio. She became apathetic and even ceased to brood over her husband's death. She felt suicide would be too much effort. She had bread, milk, and eggs delivered to her studio and ate nothing else. She spoke to and saw no one. She seldom removed her clothes, cleansed herself, or straightened the studio. She stopped doing sculpture but methodically spent her days making pottery, much of which she emotionlessly destroyed as soon as removed from the kiln. In December she began to dream of her husband. Her dreams, the contents of which she would not reveal to doctors who examined her, disturbed her. She became anxious and restless and eventually sought psychiatric aid.

When she was first interviewed, this woman was dressed in tan corduroy slacks with tight legs and a baggy seat, a white shirt with French cuffs which were not doubled back but flapped down to her fingers, a green velvet jacket, white, pointed oxfords, a white, dangling scarf, and coarse cotton hose. She wore no jewelry or makeup and her hair was merely brushed back off her face. Her nails were dirty and she had numerous paronychias. Her facial expression was one of apathy and neither sadness nor joy could be elicited. She averred that life was hopeless, and that nothing made any difference. She denied self-condemnatory thinking, and no ideas of reference or influence, or hallucinations or delusions were elicited. She denied previous depressions.

There was no record of mental illness in her family. Her father was a moody, respected country lawyer who had "a terrible temper at times" and professed atheism. She said that as a young child she had always crawled in his bed on Sunday mornings until once when she was 6 he touched her genitals. Thereafter she could not bear to have him near her. Her mother, a music teacher, was the family disciplinarian and a sentimentally religious "Christian woman." The patient said she loved her mother very much until the period of puberty, subsequent to which she turned more toward her father. There were half-siblings from her father's 2 earlier marriages, but the patient was never close to any of them or her own 5 siblings. She said her home was unhappy and that, as a result of religious arguments, her parents wouldn't speak to each other for weeks at a time. She did not speak until she was 3 years old. E. W. was a sickly child. She experienced numerous nightmares and, as a young child, had a terrible fear that her mother would die. She spent many nights standing outside her parents' room "listening for my mother's breathing because I had to make sure she was alive." She found schoolwork easy but had "a million whippings" because she daydreamed all the time. She graduated from high school at 16 and then taught for one year in a country school. At 17 she fled from her family and moved from her country town home to a large city where she spent 4 years studying art. She had no "dates," worked night and day, and "almost starved." She had had no sexual instruction and was frightened at 12 by the onset of menstruation. She denied any interest in sexual matters and had no heterosexual experiences until she met the man who later became her husband. She denied homosexual encounters and masturbation. While she was studying art she met a "dark, vital Russian Jew," a refugee who had been a revolutionary against the czarist regime. He taught languages and eventually became professor at a large eastern university. He was an artist and writer and well-known as a translator and critic. He was a notorious philanderer. Their marriage was turbulent because of his frequent affairs. E. W. knew of them, but for the most part denied to herself that she cared, schooling herself with the doctrine that "love was above the sins of the flesh." She wanted children and he did not. No contraceptives were used, but

there were no pregnancies. Her husband was asthmatic, and among her happiest moments with him were the periods when he was severely ill and dependent on her. She described herself as a dreamer and a "lone wolf." She said she had always been interested in intellectual things. She had numerous acquaintances and few friends. She accumulated a sizeable knowledge of art, literature, and philosophy. She said she was an idealist and a champion of the underdog. She was a self-styled "rebel and liberal." She suffered lifelong "stomach trouble" characterized by belching and sourness and occasional preprandial burning in the epigastrium. At 50 she was certainly diagnosed to have a peptic ulcer and treated with a Sippy regime. She recovered and subsequently suffered only vague epigastrial discomfort. She underwent an asymptomatic menopause at 53.

Physical examination revealed small, soft axillary lymph nodes, complete dentures, a questionable mass in the right lower quadrant, "presumably cecum," moderate varicose veins, and mild thickening of the peripheral vessels; blood pressure 118/72; pelvic examination normal.

Laboratory studies showed normal blood cellular elements, urinalysis, and electrocardiogram; Wassermann test negative. X-rays revealed moderate emphysema of the lungs, moderate osteoporosis of the cervical and thoracic spine, hypertrophic spurs on the 6th and 7th cervical vertebræ, and a presumed gall bladder stone.

She reluctantly accepted inpatient care, during which she was restless but usually cooperative. She took an intense dislike to certain people, without apparent reason. She was seclusive and glum. Electroshock therapy was instituted, with 3 grand mal seizures during the first week. After 7 days in hospital she heard that her old dog refused to eat for the veterinarian, and insisted on leaving the hospital to care for him. She had but mildly improved. She vigorously protested each shock, but appeared for 2 outpatient treatments. She then refused further electroconvulsive therapy.

The interval between her first and fifth treatments was 12 days. At the end of that time she had very mild loss of memory for recent events. She was obviously more interested in her surroundings and her appearance, was more alert, but otherwise she was unchanged. It was decided that she should be seen at weekly intervals.

During the first few interviews, E. W. complained of various physical ailments, especially relating to the stomach. She angrily denounced all doctors, particularly the therapist, and refused standard medical symptomatic treatments. Simultaneously, with a marked emotional explosion, she recounted her husband's many philanderings. She described affairs she had had "to get even" and told of 2 impulsive suicidal attempts with which she had tried to punish her husband 10 years after their marriage. She told of youthful Baptist missionary aspirations and her turbulent change of ideologies to what she called "free thinking." She told of her communistic ideas and spent much time eulogizing Eugene Debs, Henry Wallace, and Soviet officials. She told of her husband's severe asthma and related how she had sometimes put allergenic substances in his bed in order to precipitate attacks. When his asthma was severe he required contant care. She said, "The times I was really happy with him were when I was nursing him." She expressed guilt about his death, due to a heart attack, and felt that she had been partly responsible for it. When he died, she lay at his side most of the night, periodically laughing hysterically. At midnight she got up and canned fruit. There were no tears. During the first month of interview treatment the therapist was entirely passive.

Either during the outpatient electroshock therapy or immediately thereafter, the patient made the statuettes depicted in Figs. 11, 13, and 15. These figurines were done automatically and impulsively.

In the fifth interview her hostility suddenly diminished and she began to describe her sexual life in a systematic manner. Her father fondled her genitals when she was 6, and another man did so when she was 8. During her first 18 years she had numerous fantasies of idyllic love affairs but no social contact with men and very little with women. At 18 she met a man who "electrified" her, and 3 days later went to live with him. Six months later they married because he accepted a university appointment. He was passionate and she was always cold and frequently anesthetic vaginally. She knew of her husband's many affairs but denied resentment concerning them. At the end of the fifth interview she threatened suicide. The therapist took an active rôle at this point, indicating that she had always previously left doctors before they could help her, and had twice tried to punish her husband with suicide. He also felt reassurance was indicated and, when she said he should think her terrible, said that on the contrary he liked her.

During the next month she expressed much hostility toward her husband and at length admitted that she resented his behavior and had wished for his death. In the 9th interview she presented a dream which clearly depicted the therapist as her lover. During the 10th and 11th interviews she compared him to a former lover and found her emotions rekindled concerning that man. She decided to return to him, and discontinued therapy. She was subjectively and objectively markedly improved. She was socially active and alert. She had taken her business affairs in hand and resumed her artistic endeavors. She presented the therapist with the statues shown in Figs. 3 and 4.

Two weeks later, E. W. called for further appointments. She had not communicated with her friend. She asked to be seen twice weekly. She brought a number of sketches of proposed statues. They consisted of penises and breasts going in opposite directions. She said they represented her and therapist, and that they were going in antipodal directions because "psychoanalysis is artificial." During the next few interviews she told of a marked desire to be a man, and to castrate men. She presented sketches in which she had symbolically done so. She told of her husband's great attraction to her breasts, and said that from

1930 onward she had fantasied mutilating her breasts to deprive him of them.

During the first 6 resumed interviews she tried very hard to get the therapist to fight with her, and depreciated him vigorously. During the next 6 interviews she related with great emotion her lifelong desires to be a mother, and brought dreams and drawings in which she fantasied the therapist as father, husband, and lover. Once she brought as a gift 16 books concerning sexual customs and philosophies in many lands. They had been her husband's. She had fantasies of being pregnant by the therapist. In the 24th interview she became relaxed and said she now felt calm and realized her fantasies had been elements of transference; she now considered the therapist a friend and a son. From the 11th through the 24th interviews the therapist was passive and made only superficial interpretations.

During the preceeding weeks E. W. had run a low-grade fever. A medical consultation revealed a probable ovarian carcinoma and she was hospitalized, after 5 months of psychotherapy, for a laparotomy. It was determined she had a highly malignant embryonic ovarian carcinoma with much intra-abdominal spread. She was not informed of the outcome of surgery, nor did she ask. The consensus of the pathologists and surgeons was that she had but a very few months to live.

During her hospitalization she composed numerous romantic poems which belied her statement of having ceased to picture the psychiatrist as her lover. Her sketches were varied, but an occasional one yet showed a woman holding a baby. One poem depicts her mood best:

> When I die
> Let me be the wind
> Sailing the ships
> Finding the moist places
> Where the lilies grow —
> Fanning the fire
> Through the forest
> In vengeance —
> But —
> When the evening comes
> . . . . touching the face
> Kissing the lips
> Caressing the hand
> . . . . of you.

She spoke not at all of death, but her mood was sad and her writings and drawings were of death and melancholy.

Therapy was resumed after the interval of a month. She was guarded and talked of the writings of various authors. She dispassionately reviewed much of the previous material but seemed to have no interest in treatment. She was active socially and worked productively with more calm. After half a dozen interviews it was decided that therapy had best be terminated. Soon thereafter the therapist received the following letter: "Thank you again for freeing me as a patient. I had known for some time the gestation for this period was over, and was waiting, probably unconsciously, for your help. I felt I could not do it alone. I shall always love you. In my soil, few things grow but when they do the roots go deep (God pity me) and however severe the pruning, the shoots *will* come. We will speak of it no more. Once is enough for always." She was not again seen for treatment. It was considered that her death was near and that further therapy would be too painful to her to warrant it. However, a friendly, social relationship was begun. It was confirmed that she was strongly Russophile and a champion of Communism and fellow travelers. She was markedly anticapitalist and strongly supported labor's every claim, legitimate or not. She stoutly defended minority groups, even when no one opposed her. She displayed a great interest in pessimistic philosophies. She showed great generosity and much appreciation for affectionate consideration. She revealed a love for music, but particularly atonal and bizarre, unorganized music. She showed great patience as a teacher of ceramics. She seemed periodically to retain her newly admitted knowledge that she had greatly resented her husband's doings and had wanted to harm him, but eventually it appeared she had lost all insight into the true state of affairs. She continued to be moody but did not again become psychotically depressed.

Some time after therapy had been discontinued, a colleague suggested that it might be worthwhile to report the case history and correlate it with the sculpture of the patient. E. W. freely collaborated and provided further examples of her sculpture for photography. In the following paragraphs, the figures are explained and partially related to her life.

Fig. 1.—"Maxim Gorky." Bronze head cast from a clay model; produced in Italy in 1927, 5 years after her marriage, to illustrate a published biography. At that time E. W., uninvited, had followed her husband to Europe and felt unwelcome. Referring to the statuette she said, "Gorky was a man who produced optimistic writings about sad subjects." She had an intimate acquaintance with Gorky's appearance, and said, "He wasn't so sad as the portrait." Although she had not consciously incorporated her own sadness into the sculpture she remarked, "It must have been part of my sadness I put into his face."

On a train journey to be with her lover, she found herself drawing, as though in a trance, sketches for the sculptures pictured in Figs. 2, 3, 4, and 5.

Fig. 2.—"Diana." Bronze. 1930. She commented: "I was repentant. I pictured Diana after she got what she wanted and

was sad about it. The bird was dead and she had lost it. I didn't know I was picturing myself, but I see now it was that something had been killed between me and F" (her husband). Another time she called the dead bird a dead phallus.

It is to be noted that, in this statue, the right breast is sunken. E. W. derived this form construction from an artistic theorem that concave and convex surfaces presented the same feeling. However, it was in 1930 she began to fantasy mutilating her breasts to deprive F. of them. This figure was built in one night and later cast in bronze. "I was thinking Diana was a huntress. I was in a trance and didn't know what I was hunting."

Fig. 3.—"Lot's Wife." Mahogany. 1930. "She was looking backward at something she had lost. The piece of mahogany wouldn't permit her left arm to point back, so I made the clavicle lines do that. The right arm is hanging limp because she was reluctant to go forward with her husband." This was E. W.'s initial extramarital affair and she found her first real sexual gratification with this lover. "I guess I was looking back at something I had wanted but had not realized with F. Lot's wife had children." It must not be forgotten that she associated the therapist with this lover, and that she spontaneously made a gift of statues 3 and 4 to the therapist before she had analyzed their meaning. She had never previously thought of the sculptures as being herself. The hollow breast again appears.

Fig. 4.—"Lot's Wife." Alabaster. 1930. "There is a straight line down the middle. All to the left, from where she has come, is desirable. All to the right, where she is going, is undesirable. Her left arm is down and reconciled. The right arm just hangs, limp. Another arm, hope, is over her head. The left breast is firm and up. The right one is sagging and dead. Lot's wife was going with her husband into a new area." (F. approved of her affair with her lover.) The same remarks that apply to Fig. 3 apply to Fig. 4.

Fig. 5.—"The Lovers." Mahogany. 1930. "I had returned to F.. I was sorry but not repentant. I wanted F. there and secure. I wished I hadn't begun the affair. When I carved it I didn't think of myself but just thought that a man protects a woman he loves." The hollow breast and hollow thigh are to be noted.

Fig. 6.—"Cassandra." Clay. 1939. "I'm sure it's purely political. I did it at the time of Munich. The world was going to war and all was sad. I was much wrought up." As one can see by comparing the head with Figure 9, this too is a self-portrait. The long face, the sensitive mouth, the high forehead, and the attenuated nose with the flare alæ are too similar to be mistaken. While the world was in such a state that men should all have been despondent and "wrought up," her personal life was responsible for much of her unhappiness at this time. A strong vein of self-projection was obvious in all her philosophies and interpretations of problems involved.

Fig. 7.—"Conflict." Aluminum. 1932. "At that time I lived alone in the studio and he lived alone in the house. At that time I shot at one of his lovers and was tormented. We couldn't get along. I wanted to kill her so he couldn't have what he wanted." She felt the 2 hemispheres were herself and her husband, separated by conflicting lines and facing opposite directions. The ax-shaped form she merely called "conflict." At the base of the design are 3 steps, unequally balanced and disjointed by vertical lines. "Those were our lower parts which got together but didn't match." She had been brought up to believe sex was sinful, shameful, and base. She and her husband did not "match" sexually because she did not have orgasm with him. It must be recalled that, as a virgin who had completely rejected any physical contact before she met F., she willingly went to live with him 3 days after she met him. She maintained this common-law marital relationship for at least 6 months before their marriage. Such a practice was entirely foreign to her strict upbringing. It seems reasonable to interpret the plaque as her method of saying that the basis of their marriage was sexual and that the reason for their conflict was mismating in the same sphere.

Fig. 8.—"Mother and Baby." Red stone. 1933. "It was in the depression. I saw a poor woman and her baby sitting bewildered and alone at the side of the road, not know-

ing where to go." E. W.'s desire for a child, and her own indecision as to what road to take, must be considered as relevant in connection with this figure.

Fig. 9.—"Self-Portrait." Plaster. 1944. Sculpture made during the first month after her husband died but never finished. "I felt as though life had ended. I couldn't bear to see anyone. I wanted to be alone. I felt nothing. I couldn't bear to finish the head. I hate it. I can't stand to look at it." The immeasurable sadness of "Cassandra" is here replaced by sadness combined with withdrawal. From the sculpture itself better than from the photograph one gets a profound impression of death. Her withdrawal is portrayed by the closed eyes.

Fig. 10.—Unnamed. Clay. 1947. "It's just sex. That was when I wanted you as a lover. It's penises, breasts, and a vagina."

Fig. 11.—Unnamed. Clay. 1947. This figure was made within a few days of the "Horse" (Fig. 15) and also in a "trance." E. W. had no associations except to say, "I knew I had to support it with small hands." The hollow eye reminds one of a death mask. The hollow shell is reminiscent of the hollow "Horse." It might be conjectured that the small hands are a child's hands. At that time she often called the therapist a child. The long nose probably identifies the figure as her own portrait.

Fig. 12.—"Leaf Insect." Clay. 1947. "I thought it was just eucalyptus leaves and balls. Now I see it's phalluses and testicles. I guess I got lonesome." This piece was done after therapy was concluded. In other photographs the wing strongly resembles the vagina in Fig. 10.

Fig. 13.—Unnamed. Clay. 1947. E. W. had no associations to offer. The face is well-nigh expressionless. The long nose is again present. The left arm is hollow; there is only one breast. (See Fig. 5 with the hollow thigh and the concave breast.) One could read this as a self-portrait and representative of her depression.

Fig. 14.—Unnamed. Clay. 1947. "It's the same as Fig. 10."

Fig. 15.—"Horse." Clay. 1947. The statuette was done either during electroshock therapy or just after its completion. "I was just working with clay. I seemed to go into a trance and then I made a horse. It's empty and biting its back. I had never made a horse before."

Comment.—A true dynamic formulation of this case would require psychoanalysis. Consequently, this publication must be restricted to a correlation of E. W.'s sculpture and her personality, as it appeared in the short-term psychotherapeutic interval described.

Throughout the psychological material presented are certain major characteristics: depression, withdrawal, impulsiveness, preoccupation with sexual subjects, self-blame, masochistic attitudes, rebellion against authority, conflict between masculinity and femininity, and overreaction to her conservative, rightist background, resulting in a blind championing of the underdog and the leftists.

Psychotic depressions following the death of loved ones have been depicted as developing in narcissistic, orally fixated people who had marked ambivalence toward the ones who died. Frequently the death has been desired and the death wish has been repressed, leaving a residue of guilt. Fenichel (5) has said, "The identification with the dead also has a punitive significance: 'Because you have wished the other person to die, you have to die yourself.'" Although a detailed analysis of each sculpture is forbidden by space limitations, a study of one figure may serve as a representative illustration. The "Horse" is a particularly interesting figurine. In this small, crude production we find an animal devoid of insides. In the author's experience, psychotically depressed patients not infrequently present delusions in which their insides, particularly intestines, are absent. The writer found in the literature no case in which this delusion has been analyzed. On theoretical grounds it might be explained by unconscious denial of the oral incorporation of the love object, as though the patient were saying, "How could I have eaten him and made him a part of me? I have no insides in which to harbor him." The "Horse" is a solitary figure. It is biting its back. Although the author is not justified in definitely interpreting the "Horse" without deeper insight into the dynamics of the case, tentative postulations seem warranted. The "Horse" is alone and its interest is

FIG. 1.

FIG. 2.

FIG. 3.

FIG. 4.

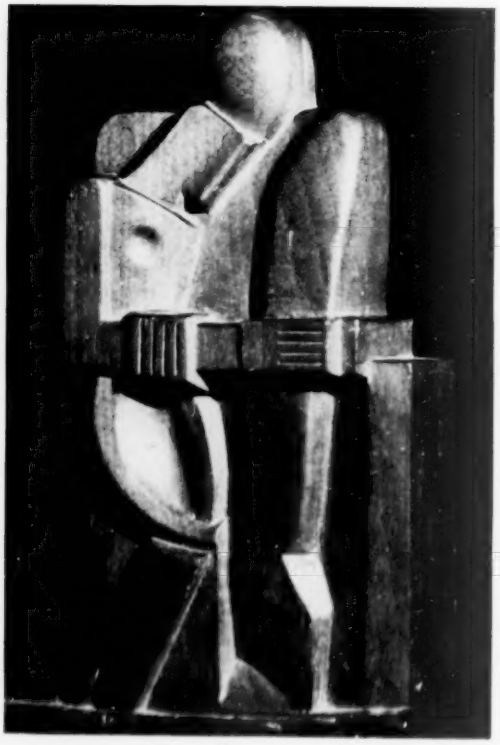

FIG. 5.

FIG. 6.

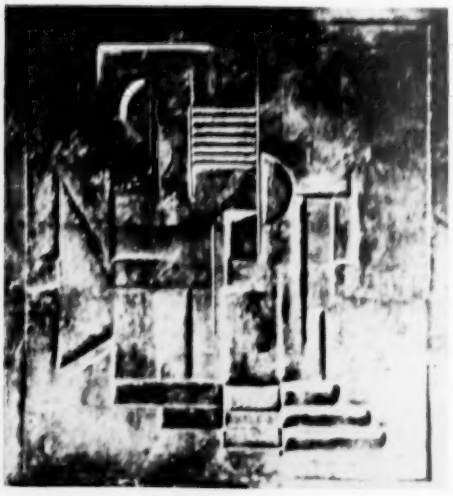

FIG. 7.

FIG. 8.

FIG. 9.

FIG. 10.

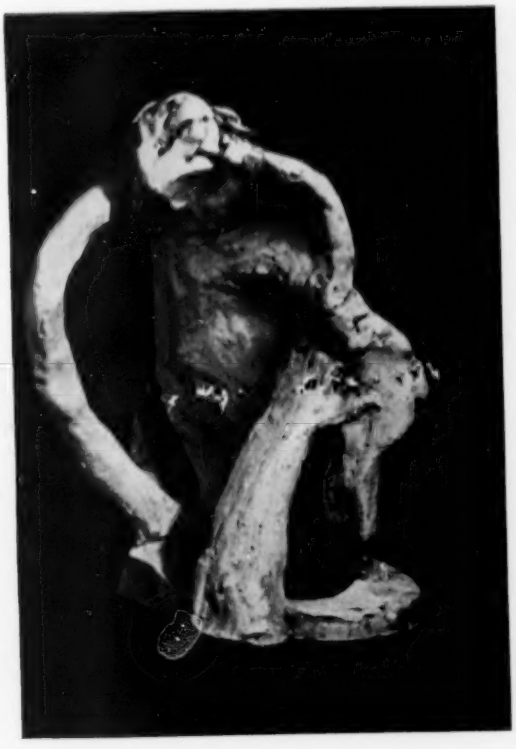

FIG. 11.

FIG. 13.

FIG. 15.

FIG. 12.

FIG. 14.

directed toward itself. E. W. was markedly withdrawn and interested in no person but herself during her depression. It is biting itself (punishing itself—significantly, orally). E. W. placed allergenic powders in her husband's bed, causing severe asthmatic attacks and perhaps contributing to his death. She later seriously contemplated suicide and punished herself by refusing to eat, and in other ways. Then, the horse is empty. The "Horse" seems to closely depict E. W.'s personality at the time she sculptured the figurine. It was produced automatically and impulsively and would appear to more nearly portray E. W.'s unconscious than some of her more studied sculptures(6).

Depression is objectively flagrant in most of the sculptures portrayed and, in others, is present in her associations. Thus, in "Maxim Gorky" she has accentuated the sadness of a voluntarily chosen sad subject. "Diana" is repentant and rueful. The statues of "Lot's Wife" clearly depict a reluctance to go forward, and sorrow at the necessity. Once again, the subject matter itself is important. The repentant, sad theme is to be seen anew in "The Lovers." One could scarcely imagine a sculpture more representative of sadness than "Cassandra" and again, in the utter melancholy of "Self-Portrait" is graphic depression. Sadness is a part of "Mother and Baby." Depression is obvious in Figs. 11 and 13. In the plaque "Conflict," one cannot see depression objectively but her associations are laden with sadness.

Withdrawal is harder to illustrate, or at least to interpret as present in portrayals. Nevertheless, it can be seen in "Diana," the statues of "Lot's Wife," her associations to the plaque called "Conflict," "Self-Portrait," "Horse," the unnamed figures 11 and 13, and probably in "Cassandra."

Preoccupation with sexual subjects is obvious throughout. Breasts are openly depicted in "Diana," the two figures of "Lot's Wife," "The Lovers," "Mother and Baby," and in Figs. 10 and 18. The hemispherical forms in the plaque "Conflict" closely resemble breasts. Frank penises are represented in Figs. 10 and 14 and in "Leaf Insect." During therapy the patient once associated a horse as being a phallic symbol. She called the dead bird in "Diana" a dead penis. Phallic symbols can be seen in the plaque "Conflict," and she referred to the rectangular, elongated steps as "our lower parts." The birth motif is seen openly only in "Mother and Baby." Sexual themes other than open anatomical depiction are present in all the figures except "Maxim Gorky." "Cassandra" is a self-portrait and pictures her sadness in her marriage, the basis of which was said to be in the mismatched union of their "lower parts."

Impulsiveness is perhaps better demonstrated by the history than the sculptures themselves. We know she impulsively destroyed productions on occasion. After treatment was terminated, she sculpted a head of the therapist. At least twice she suddenly destroyed the work she had done. She impulsively and perhaps automatically drew sketches of or produced "Diana," the statues of "Lot's Wife," "The Lovers," "Cassandra," the plaque "Conflict," "Self-Portrait," Figs. 11 and 13, and "Horse." The construction of "Horse" and Figs. 11 and 13 is crude and reveals the careless rapidity with which they were made, and thus perhaps illustrates her impulsiveness.

The differentiation between self-blame and masochistic attitudes is probably too fine to be demonstrated plastically. In the figures presented here, we find evidences of self-mutilation in the concave breasts of "Diana," one figure of "Lot's Wife," and "The Lovers," and in the "Horse," which is biting itself. If we consider the dynamics of depression itself to legitimately apply to our interpretation of these sculptures, we may assume that all the figures which depict depression illustrate self-blame.

Rebellion against authority is perhaps more difficult to depict. Certain of her sculptures are intended to accurately and realistically portray the subject matter (*e.g.*, "Maxim Gorky" and "Self-Portrait"). In other figures, although the sculpture pattern is conventional, details disclose rebellion against conservative authority. In the concave breasts of "Diana," "Lot's Wife," and "The Lovers," and the concave thigh in "The Lovers," E. W. was copying Archipenko's then-revolutionary theory that concave surfaces could be equivalent to convex surfaces. Other figures lean toward abstractionism.

Her own background was markedly conservative. The usage of the wide diversity of materials as sculpture media and her dissatisfaction with conservative sculpture patterns probably limn rebellion against authority.

Conflict between masculinity and femininity is intrinsic in the plaque "Conflict." A majority of the figures are blatantly and solely feminine in context. Some display masculine and feminine symbols intermixed. The lines of "Diana" and her strong, heavy form display her masculine propensity although she is a woman repenting the death of the bird (phallus of her lover). In her associations to certain dreams E. W. fantasied she had lost a penis of her own. The wide variance of sexual symbols perhaps indicates the disquietude and conflict of the artist. It might even be conjectured that her preoccupation with art is in itself an evidence of her dissatisfaction with her feminine rôle.

From a theoretical standpoint, one would expect a depictment of retrogression of form and pattern in the sculptures produced during the regressed, psychotic episode. "Self-Portrait" was produced immediately after the death of her husband. Its construction and design are those of a well-integrated artist. Figs. 11 and 13 and "Horse" were impulsively constructed as the patient began to be reawakened from the deepest period of her psychosis. These figurines are quite unlike any previous works in their crudity and roughness. As psychotherapy progressed after the termination of electroshock therapy, more polished statuettes appeared, as represented by Figures 10 and 14, and "Leaf Insect."

SUMMARY

The life and psychotherapeutic course of a 57-year-old depressed artist are presented in combination with a random, representative selection of her sculptures. The characteristics of the plastic productions appear to reflect closely the personality patterns and case history of the patient.

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PROBLEMS OF INSTITUTIONAL CARE OF THE AGED[1]

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The improvements in living conditions and medical care have lengthened the average span of human life. Each year a greater percentage of the population reaches advanced ages, and statistics indicate that this trend will be maintained. Thus there are ever-increasing numbers liable to degenerative changes, especially in the central nervous system. If the impairment is sufficient to produce serious mood disorder, paranoid delusional systems, advanced deterioration, or difficult behavior problems, the patient is usually admitted to a psychiatric hospital. There is no question that such patients need and deserve the treatment and protection that is provided only by a hospital setting. However, the majority of elderly patients will have only mild memory defects and the general deterioration of aging. Their medical care and disposition present complicated problems that are not solved adequately at present either by the community or the psychiatric hospitals. Even greater problems are to be expected in the future as this group increases unless a carefully considered program for their care is formulated. This discussion is concerned primarily with the elderly patient whose outstanding disability is simple deterioration without disturbed behavior or major psychopathologic trends.

Although there has been an increase in the number of the aged, there has been a decrease in the socio-economic and cultural capacity to care for them in the community. In the earlier simple rural community it was not too difficult for the mildly confused and forgetful patient to get along satisfactorily. The physical hazards were fewer and the tempo of life was more leisurely and suited to his diminished abilities. Further, the cultural pattern included family care of the "old folks," and the neighbors regarded their problems in a sympathetic and tolerant manner. The modern industrialized and urban civilization presents tremendous physical hazards to even the most agile and alert. The aged usually cannot cope with the actual physical dangers, and the speed of modern life both threatens and bewilders them. Families become desperate when an aged parent wanders away from home repeatedly and is found amidst speeding traffic. The possibility of serious accidents is often so great that constant supervision is necessary. This is emotionally exhausting and can be economically disastrous when a son or daughter, the sole support of the aged parent, must stop working to watch that person constantly. The same situation arises when the husband must leave his job and remain at home to protect his wife.

A greater barrier to successful community management of the aged is the changed cultural attitude toward responsibility for their care. Formerly, there was greater willingness to care for the aged parents in the home, and children accepted this responsibility as their lot and duty. This sense of filial obligation seems to have declined more recently, owing perhaps partially to greater individual insistence on the right to live one's own life. However, other factors have contributed to this attitude. Inadequate housing with cramped living quarters has added to the resentment over space assigned grudgingly to the parent. The attitude of the husband over the continued presence of his wife's parents, or vice versa, has served as subject matter for continued nagging quarrels until the wholesome perpetuation of the marriage is endangered. These antagonisms and emotional tensions are frequently exaggerated by the attitude of the grandchildren. It is not unusual to observe behavior problems in adolescents who, resenting the grandparents, refuse to use the home as their social center and become involved in truancy and unwholesome companionships. It is even more distressing when the grandfather shows undue affection, bordering on sexual interest, in the young girls in the home. Even the neighbors may participate in the resentment, and community bickering and hostility occur

[1] Read at the 105th annual meeting of The American Psychiatric Association, Montreal, Quebec, May 23-27, 1949.

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because of the presence of a confused elderly person in an apartment or wandering about the neighborhood. Thus, for the family, it is frequently not just a question of being unable to lead a leisurely life without responsibility; often the whole economic and emotional structure of the home threatens to fall apart because of this continued conflict. It is not surprising that such a family becomes irritable and resentful and, in a harried and desperate manner, seeks some solution regardless of how inadequate and unsatisfactory it may be.

In such an emotional climate, the plight of the aged is far from enviable. They feel keenly their dependence and helplessness, and sense the hostility about them. To this they respond by equal hostility, depression, or regression to a childlike state of timidity. They resent their uselessness and the fact that they are displaced persons in the present socio-economic scheme. The emotional disturbances are even greater when married couples must be separated, because the burden must be divided between different homes. With all these available bones of contention, frequent bouts of bitter recrimination occur between the family and aged parent until mutual hostility seems constantly on the ebb and flow. For the elderly, with already impaired faculties, this is often the precipitating factor for a psychotic episode. Many of the acute psychoses of the aged necessitating admission to a psychiatric hospital are the upshot of a family quarrel. After a short hospitalization the psychosis often recedes and the family is again faced with the same problem; too frequently they refuse to accept it and the psychiatric hospital has another permanent resident.

Many families have found that the home management of this problem has led to such intolerable emotional disturbances that some solution must be found outside the home. Even a small income from the parent or an old age pension has not been sufficient inducement to make them willing to tolerate the dissension in the home. Some have arranged for the parent's admission to the so-called county home but still suffer from an acute sense of guilt and shame because, regardless of name, it is still the "poorhouse." They realize that there life for the aged is barely marginal in the physical sphere and completely barren in the psychic and spiritual sense. The elderly patients are intermixed with a potpourri of all the socio-economic misfits and outcasts, and there they wait in a pitiful and barren existence for the merciful release of death.

Other families turn to commercial nursing homes for assistance. These are usually large old mansions which can be purchased cheaply because they are now in the less desirable sections of the city. Those with a low monthly rate offer a sorry level of care which is indistinguishable from that given by the most inadequate of the county homes; the only real difference is that the pride of the children is spared by this travesty on private care. The physical facilities are completely unsuitable, the rooms overcrowded, and the hygiene is often deplorable. The better nursing homes may provide clean surroundings and kindly care, but the proprietors still have the problem of operating a small establishment at a profit; this requires a monthly rate that relatively few families can meet over a long period of time. Even the best provide nothing but custodial residence; life for the aged in the homes is still empty and lonely.

The homes for the aged which are sponsored by various religious and fraternal groups offer a better standard of physical care but usually there are few programs of activities suitable for their emotional, intellectual, and vocational stimulation. Frequently the establishment is so small as to preclude any program except one of physical care. In reality, these are nothing but well-administered, clean homes in which custody is the sole function. Usually there is a tacit assumption that the elderly are incapable of participation in active programs utilizing their skills and knowledge, which are often not inconsiderable. Further, the great majority of the aged who need care are excluded by reason of ineligibility. It is doubtful if religious and fraternal groups will be able to cope with the growing magnitude of this problem in the future.

The public psychiatric hospitals have always been the final resource and refuge for all those individuals for whom society could find no other place. At present more and

more families are cutting the Gordian knot of disposition and continued care by commitment of the elderly relative to the state hospital as psychotic. Often the families admit openly that they are utilizing subterfuge, distorting and exaggerating the behavior of the patient to secure early admission and to reduce the likelihood of discharge. Even when commitment has been necessary because of disturbed behavior, the patient's recovery to a state of mild forgetfulness and confusion is greeted with dismay by the relatives. It is not unusual to observe their complete avoidance of the hospital and studious neglect of all correspondence urging them to return the patient to their home. But since many families cannot meet the expense of private nursing home care, their only choice is between the state hospital and the county home. Most families feel less stigmatized with the parent in a public psychiatric hospital.

This ever-increasing demand for admission of mildly deteriorated elderly patients has placed a tremendous load upon public psychiatric hospitals. It has caused serious overcrowding and dangerous delay in admission of younger psychotic patients. A large portion of the hospital personnel and budget has been diverted to what amounts to custodial care of the aged rather than to an active therapeutic program for younger patients who might be rehabilitated. In one hospital practically one-third of 2,400 beds was occupied by patients over 60 years of age(1). With the combined factors of increased longevity and lessened community capacity to care for this group, it appears that the population of the aged in state hospitals will assume staggering proportions in the future(2). One hospital superintendent remarked bitterly, "If the present trend continues much longer, I will not have a hospital for the treatment of the mentally ill, it will be an 'old ladies' home.' "

A Proposed Program for the Future

The afore-mentioned haphazard types of disposition have not solved the problem satisfactorily for the aged, their families, or state hospitals. A new type of institution, supported and managed by the state, is necessary to provide a rounded and complete program of physical and psychologic care. One or more such homes could be located in accessible rural areas and should probably be of a colony or semivillage type of construction, thus minimizing physical dangers and permitting maximal freedom. The criteria for admission would be the age of the patient and the need for such domiciliary care. It would differ from a county home in that it would be solely for the aged and geared exclusively to their needs, and it would provide an active program of community activities and interests.

Such state homes should be large enough to be operated economically and small enough to provide some individualized attention. The professional staff could be small, with a few physicians interested in general geriatric practice and such ancillary services as occupational and recreational therapy, clinical psychology, and social service. The number of matrons needed probably would not be large and could be made up of middle-aged women who would accept this type of employment although not willing to work in a psychiatric hospital setting. Such an institution could be operated economically with a relatively small and inexpensive staff. Considerable sums could be saved by transfer of suitable patients from state hospitals and the abandonment of the duplicative system of multiple county homes, each with its own staff and buildings.

It would be necessary to group the residents carefully according to their needs and their abilities for semi-independence. Quarters should be provided for the residency of aged married couples. Those residents who are reasonably self-sufficient could be housed in open dormitories or small wards and participate at will in gardening activities, work shops, hobbies, and recreational programs. Finally, those incapable of personal responsibility and self-care would be housed in an infirmary division with supervision and practical nursing care. A co-operative working relationship should be established with district state hospitals, thus facilitating the transfer of those in whom a psychosis or serious behavior disorder develops, and, conversely, the reception of the aged hospitalized patients whose disturbed symptoms have subsided.

The spirit pervading such a home would be of paramount importance. The emphasis should be upon the personal integrity and worth of the elderly person or couple. Continued activity and participation in living would be encouraged and all remaining skills and assets utilized to the fullest extent compatible with physical reserves. Every effort should be made to stimulate vocational activities, intellectual interests, attention to current events, and the fullest possible enjoyment of life. This may sound visionary and impractical, but small-scale experiments have shown that the mildly deteriorated are capable of surprising achievements when their remaining faculties are not allowed to vegetate.

The magnitude of such a project is appalling when one considers the vast numbers of those who would be eligible and desirous of admission to such a state home. The expense would be tremendous and the many practical difficulties of large-scale social planning are immediately apparent. But, whether we plan or not, the proportion of the aged in the population can be expected to increase. Some provision must be made. It is to be hoped that the state hospitals will not be forced to carry this load in addition to their already heavy and increasing burden.

SUMMARY

The present methods of managing the problems of the aged have proved unsatisfactory and inadequate. Common humanity demands the formulation of some program of care that permits the elderly to maintain dignity, self-respect, and a sense of worth as well as providing physical necessities. This can be accomplished by state institutions designed to provide a program of activities and care suited to the needs and abilities of an aged resident population. In the long run, the total cost of such care will be no greater than the present wasteful and haphazard types of custodial management. In addition, it will permit this ever larger group to spend their declining years in a setting that encourages a sense of personal dignity and utilizes their skills. It has been said, "Three score and ten years make the upshot of man's pleasurable existence." This does not have to be so if the problem is met by careful planning and new approaches. Not only will the lives of the aged be enriched, but the public mental hospitals will be enabled to return to their primary function of treating the mentally ill.

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DISCUSSION

DR. J. F. BATEMAN (Columbus, Ohio).—The splendid paper of Dr. Boyd is most timely. He has introduced a major issue in the field of hospital administration.

Our biggest problem today is the ever-mounting number of aged people. In some of our hospitals the problem is not so much their care as the fact that they occupy beds which should be used for the admission of younger treatable patients.

In the State of Ohio there has been an increase in the admissions of people 70 years and over of 1% a year since 1940. In 1940, this aged group accounted for 7.4% of admissions; in 1948 it rose to 15.6%. With limited treatment facilities this becomes a major issue of great concern. During this same period there has been a gradual increase in the number of patients 50 years of age and above, from 36% in 1940, to 43% in 1948.

This increase in admissions of aged people began at the outbreak of World War II, at which time our country saw the greatest socio-economic change in history. With the son or grandson going to war and the daughter or granddaughter out picking up the free-flowing money in industry, there was no one to take care of the aged people at home. Following the W.P.A. and the various doles and increases in old age assistance, there has been a growing belief on the part of our younger generation that the State and Federal Government should assume the responsibility of the aged.

People who otherwise might assume the family responsibility of their aged parents now say, "Oh well, others are getting it, we might just as well get our share," and so the aged person is placed on public assistance, in a home for the aged, or, if they show memory changes and forget where they placed their cane or their false teeth, they are sent to a state hospital. We are meeting our family responsibilities today in a way that would make our forebears hang their heads in shame.

In 1940 there were 9,000,000 persons in the United States over the age of 65. It is estimated that in 1950 there will be 11,000,000; and in 1980, this number will rise to 19 to 22,000,000. These figures are startling and will demand some very clear thinking and planning if we are to meet the issue in a practical and humanistic manner.

It is high time that geriatrics takes a command-

ing place in the practice of medicine. For years we have emphasized child guidance and rightfully so. We must now focus our attention on the problems concerned with a rapidly aging nation. Geriatrics is not altogether concerned with the length of life. Its scope is preventive and deals with the breadth and depth of life. People who survive the present-day expectancy of 68 should not be treated as statistical errors; we must consider their health and ability rather than their birthdays. Certainly this group of lonesome and pitiful people deserve our sympathetic attention in any mental hygiene community planning. We must help them live an integrated useful existence.

PSYCHIATRIC NURSING BY AFFILIATION

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Because they recognize that mental and emotional factors are important components of all types of illness, many schools of nursing are now placing increased emphasis on mental hygiene in their basic training courses. One of the most effective methods of providing the necessary insight is by affiliation with a mental hospital. Such affiliation is also important as a device for recruiting mental hospital personnel since nurses are more likely to enter this field if their interest has been aroused during their training period.

Training in a mental hospital gives students an opportunity to study mental and emotional disorders in their more extreme forms. Through such study, they gain a keener understanding of the milder forms of maladjustment that they are likely to encounter in whatever branch of nursing they may subsequently enter.

To be most beneficial to the mental hospital as well as to the student nurses, every aspect of affiliation should be carefully planned in advance. It is the purpose of this article to outline some of the features of advance planning that contribute to a successful program.

QUALITY OF HOSPITAL CARE

The value of the training the student nurse receives will depend, in large measure, upon the quality of service the hospital gives its patients. Before requesting a mental hospital to establish an affiliation, nurse educators and members of nurse licensing boards should make certain that its services include:

1. *Psychotherapy.*—Does the hospital employ a sufficient number of competent psychiatrists to provide regular attention and to make psychotherapy available to all patients?

2. *Psychiatric Nursing.*—Does the hospital employ nurses who have had advanced, graduate training in psychiatric nursing? Are its standards for general nursing services high? What is the status of the nursing profession in the hospital—do nurses have a voice in general policy-making conferences, in formulating plans and procedures?

2. *Social Service.*—Is there a staff of qualified psychiatric social workers to assist patients both in adjusting to hospital life and in adjusting to the community after leaving the hospital?

4. *Clinical Psychology.*—Does the hospital employ clinical psychologists for diagnostic testing and for treatment services?

5. *Occupational Therapy.*—Is there a registered occupational therapist on the staff? Does he have enough assistants to provide classes and ward occupations for all patients?

6. *Recreational Therapy.*—Are music, dancing, drama, and other recreational activities used in treatment as well as for entertainment? Does the hospital employ a competent recreational therapist?

7. *Community Activities.*—Does the hospital maintain close contacts with the community so that patients do not feel isolated from the outside world? Religious services for all faiths, conducted weekly in the hospital auditorium or chapel by local clergy, choir, and others from the community help the patients to feel that they are a part of the community. Frequent visits from volunteers and from friends and relatives of patients and staff members are other indications that the hospital recognizes the value of good community relationships.

8. *General Environment.*—Is the general atmosphere of the hospital happy, busy, hopeful? Vegetable and flower gardens that the patients cultivate; beauty shop, barber shop, facilities for cleaning, laundering, and making and mending garments; classes in homemaking, carpentry, and other useful crafts—all such activities build patient morale. Good relationships among all employees of the hospital, a spirit of friendly cooperation with each other and with the patients —these are other marks of a wholesome atmosphere.

CONFERENCES BETWEEN STAFFS

If the hospital's facilities and services are found to be suitable for nurse training and

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an affiliation is decided upon, preliminary conferences of school and hospital staffs should be held so that clear agreements can be reached on such points as the following:

1. *Financial Arrangements.*—If the costs are to be shared by the school and the hospital, clearly and candidly stated commitments should be given by both sides in ample time for adjustments and revisions to be discussed.

In preparing the budget, it should be kept in mind that the acceptance of students usually necessitates the employment of additional nurse supervisors, instructors, and resident personnel.

Classrooms, teaching equipment (including library), visual and other teaching aids will be needed. If such equipment is not already available at the hospital, estimates of cost as well as of the space they will require and the date they can be made available should be included in the preliminary plans. However, flexibility in some details, so that adjustments can be made after the program is in operation, will contribute to good business relations between the two institutions.

2. *Course Content.*—The contents of the course to be offered, the method of teaching, length of class periods, the variety of clinical experience and the time to be allotted to each should be carefully worked out so that the educational program does not deteriorate into mere classroom instruction and paper work routines.

Plans should be made for periodic conferences between the director of student nurses at the hospital and the director of the nursing school from which they come, to discuss student progress, problems, and ways in which the program could be improved.

3. *Staff Facilities.*—One psychiatric nurse instructor for each unit of 20 to 30 students is recommended. This instructor should participate in clinical experience, teach clinic classes, and be available to help students with the problems they encounter in dealing with individual patients or with groups of patients.

There should also be qualified residence director for the students. Although she might be assigned some additional duties—in the housekeeping, library, or other departments—her main responsibility should be to serve the students during their off-duty time. She should be familiar with the recreational resources of the community, with the location and programs of the various churches, theaters, centers for transportation, etc., and should also be able to help the students develop their own recreation and leisure-time activities. She should be a cultured, sympathetic person with a genuine interest in young people.

Members of the professional staff of the hospital—psychiatrists, social workers, clinical psychologists, therapists—should be assigned definite teaching responsibilities. Their teaching functions should be recognized as something in addition to, and apart from, their regular hospital duties and should be paid for accordingly. Course outlines will be prepared more readily and class hours will be adhered to more regularly when the instructor or lecturer is reimbursed for his teaching services.

4. *Duration of Affiliation.*—Thirteen weeks is recommended for the duration of affiliation. This not only makes an equal division of the year's training period, but also provides enough time to give the student some real understanding of mental diseases and to develop ease and facility in dealing with patients. Many students are somewhat apprehensive about a mental hospital and it may take 3 or 4 weeks for some of them to become adjusted. Psychiatry is not a simple classroom or laboratory subject that can be learned entirely from lectures and textbooks. Time and continued contact with a variety of psychotic patients are required before the student begins to see and understand the rehabilitation process.

5. *Number of Students.*—Ideally, all student nurses from all schools should have a period of training in a mental hospital, one-third of the total enrollment having affiliation each year. The number accepted in any one mental hospital, however, should be determined chiefly by the number of qualified instructors available—keeping in mind the ratio of one instructor to 20-30 students. Experience indicates that it is administratively practical and in many ways very stimulating and beneficial to have students from a number of nursing schools affiliating in the same hospital at the same time.

6. *Physical Facilities.*—Living quarters,

facilities for recreation and arrangements for meals should be discussed and nurses' residence, dining, and other rooms should be acceptable. If adjustments seem necessary, a definite understanding should be reached as to what is to be done and when it is to be completed.

7. *Entrance Date.*—Consideration should be given to the day of the week and the month each group will arrive for affiliation. If this is planned well in advance, it will be easier for the hospital staff to make the students feel welcome and comfortable. Room and dining table assignments can be made, mail and telephone service organized, and other personnel details worked out to avoid confusion and annoyance.

8. *Student Services.*—Psychiatrists and other staff members should be available for consultation by student nurses. Most students will need only occasional reassurance and help in orienting themselves to a new situation. A few, however, may need professional assistance with their own maladjustments and should be able to obtain this, just as they would obtain other medical services if they were training in a general hospital.

Regulations pertaining to hours of duty, leaves of absence, sick leave, etc., should be agreed upon in advance by the school and the hospital. Arrangements should be worked out for caring for students when they are ill and for reporting illness and other personal matters to the school.

9. *Student Equipment.*—Students should wear uniforms of their own schools and should have a sufficient supply, in good condition, to last throughout the affiliation. Since many mental hospitals have extensive grounds and students may have to walk some distance to their assignments, they should be told to bring plenty of protective, outdoor clothing.

By-Products of Affiliation

The public's lack of knowledge about mental illness and the fears and superstitions that prevail are major obstacles to the improvement of care for the mentally ill and the development of preventive programs. Nurses can do much to remove these obstacles because the public naturally looks to them for authentic health information. A psychiatric affiliation helps the student nurse to gain a constructive attitude toward mental illness that she can pass on to friends who visit her at the mental hospital and to patients she serves in future years. The training likewise helps her to deal with the psychosomatic involvements present in all illness and to give informed leadership to the organization and development of community mental hygiene programs.

PSYCHIATRIC MEDICAL EDUCATION AMONG NEGRO PHYSICIANS[1]

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In recent years much has appeared in literature concerning observations of psychiatric advancement in Burma, Japan(1), and China, especially as to psychiatric medical education in those areas. Psychiatric developments in Saskatchewan(2) have been described by Lawson and McKerracher. Fouquet(3) described many psychiatric medical advances that have been occurring in France since World War II and Fishbein (4) has written at length concerning medical education in the Latin Americas only recently. Schneider(5) recently reported on psychiatric activity in advanced educational centers in Germany since World War II. The purpose of this paper is to present data regarding the spread of psychiatric information and to make known the recent progress made in psychiatric medical education among Negro physicians in the United States.

A historical approach to the interest in psychiatric medical education among Negroes dates back to approximately 1939, when Dr. Thomas P. Brennan of Grasslands Hospital in Valhalla, New York pioneered a meeting in Raleigh, North Carolina, for the purpose of consolidating the thinking of all people in the United States interested in the improvement of psychiatric medical education among Negroes. At that meeting a committee was formed which called itself the National Committee for Mental Hygiene among Negroes with representatives from the State of North Carolina; University of North Carolina at Chapel Hill; Meharry Medical College, Nashville, Tennessee; Howard University Medical School, Washington, D. C.; the Veterans Administration at Tuskegee, Alabama; State Hospital for the Negro Mentally Ill at Lakin, West Virginia; and the Mental Hygiene Committee of White Plains, New York. During a one-day meeting the Committee decided to investigate the following questions: (1) neuropsychiatric hospital facilities in the United States available to Negro patients; (2) approved hospitals in the United States that accept Negroes for training in neuropsychiatry; (3) approved neuropsychiatric hospitals that admit Negroes to their staffs; (4) approved psychiatric hospitals in the United States manned by Negroes alone. It was decided that at regular intervals the Committee would meet and report progress in investigating the above-named questions. This paper further undertakes to throw light on these problems.

Progress in General Medical Education

As a base line of such data it is well to outline in a brief fashion some aspects of medical education in general among Negro physicians. There are approximately 199,755(6) living physicians in the United States today, of which number 4,500 are Negroes. Of the 199,755 living physicians 31,498(7) have been certified by the various specialty boards, which represents a little more than 15% of this total. Of the 4,500 Negro physicians 95 have been certified by recognized specialty boards, or approximately 2% of this physician population. The American College of Surgeons has admitted 22 Negro physicians to its membership, the International College of Surgeons has admitted 13, and the American College of Physicians has admitted 7. The American Psychiatric Association has admitted Negroes to its membership for a long period of time. Negroes are known to have become members of the faculties in the following non-Negro medical schools(8): Northwestern University in Chicago, University of Chicago, Wayne University in Detroit, Woman's Medical College in Philadelphia, Western Reserve in Cleveland, Long Island Medical College, Harvard Medical School and Tufts Medical College in Boston, University of Michigan, Boston University, and St. Louis University School of Medicine, which recently added 3 Negroes to its medical faculty. There are now in specialty training upwards of 120 young Negroes

[1] Read at the 105th annual meeting of The American Psychiatric Association, Montreal, Quebec, May 23-27, 1949.

From the Homer G. Phillips Hospital.

throughout the United States. The hospitals bearing the brunt of the responsibility for such training are as follows: Freedmen's Hospital, Washington, D. C., associated with Howard University Medical School; Provident Hospital, Chicago, associated with the University of Illinois Medical School; George W. Hubbard Hospital, Nashville, Tennessee, associated with Meharry Medical College; and Homer G. Phillips Hospital under the directorship of Washington University Medical School in St. Louis, which hospital trains better than ⅓ of all Negro graduates of medical schools. The Negro physician has contributed to a moderate degree to the medical literature, but he has fallen by the wayside to some extent in research except in a few instances. We hope that in the future both of these deficiencies will be properly met.

Psychiatric Medical Education

Psychiatric medical education has been divided into 3 divisions: general, graduate, and postgraduate. General psychiatric medical education refers to psychiatric information dispensed at medical school levels(9). There are at present 2 Negro medical schools (10), both of which are approved. One is Howard University Medical School in Washington, D. C., founded in 1867, which school is supported by federal funds. The other is Meharry Medical College in Nashville, Tennessee, founded in 1876. It is not maintained by federal or municipal funds. Both schools graduate approximately 60 students per year. Their teaching schedules in neuropsychiatry are as follows:

(1) Howard University as of 1948:
1st Year: None
2nd Year: 1 quarter, lectures in psychobiology, psychiatry, 1 hr. per week
3rd Year: 1 quarter, lectures in neurology, 3 hrs. per week; 2 quarters, neurological clinics, 1 hr. per week; 3 quarters, lectures in psychiatry, 1 hr. per week.
4th Year: 2 quarters, 1 hr. per week, neuropsychiatric case presentations; *i.e.*, cases are worked up and presented to the students by staff members.
1 quarter, psychiatry, Saint Elizabeths Hospital, case presentation by physician-in-charge to the students, 3 hrs.
2 weeks clerkship on the neuropsychiatric wards where 5 or 6 cases are assigned to each student during that time. Each student makes a complete psychiatric case study of one case and presents a paper of 3,000 to 5,000 words on a neuropsychiatric subject, plus a home visit.
The teaching staff consists of one full-time professor, an associate clinical professor, and 4 clinical instructors, plus 2 clinical assistants.

(2) Meharry Medical College as of 1948:
1st Year: Neuroanatomy, lectures and laboratory work, 1 quarter, 3 times per week, 2-3 hrs. each session.
2nd Year: Psychiatry—none
Neurology—none
3rd Year: Clinical neurology, 1 quarter, 3 hours each week, lectures; clinical psychiatry, 1 quarter, 3 hours each week, lectures; visits to state hospitals 3 different afternoons during the quarter.
4th Year: None.

The above formerly comprised the entire teaching of neuropsychiatry at Meharry Medical College. The teaching staff consists of one assistant professor of neurology and psychiatry who also teaches histology and neuroanatomy. Since October, 1948, the 4th year students of Meharry Medical College have come in groups of 5 and 6 to the Homer G. Phillips Hospital in St. Louis for clerkship in neuropsychiatry for a 4-week period. This hospital is a large general hospital of 780 beds with a 100-bed neuropsychiatric ward. This service is under the directorship of Washington University Medical School and is approved by the Council on Education of the American Medical Association and the American Board of Psychiatry and Neurology for the training of residents in neurology and psychiatry (11). During the students' clerkship a dynamic rather than descriptive point of view is encouraged and maintained throughout. Students spend 8 hours per day on the ward, where they are exposed to ward rounds, case demonstrations, and individual case work. Regularly scheduled lectures on psychosomatic phenomena and psychoneuroses are given. Considerable time is spent in the psychiatric outpatient department, which is, according to Gildea(12), recognized to be of value in laying the foundation for the medical student. It is here that each student is introduced to and engages in brief and rather superficial psychotherapy.

Graduate Training

While we emphasized primarily in the above the fundamental objectives in the teaching of psychiatry at the undergraduate level in 2 schools, it should be the express function of graduate psychiatric education to provide fully trained psychiatrists for practice, for specialty training, and for investigation. To fulfill such a program requires adequate and approved places for residencies which would prepare the individual for training toward specialty board certification. The American Board of Psychiatry and Neurology was founded in 1934, but it was not until 1936(13) that the credentials of a Negro physician were acceptable for consideration by the Board for examination. It was in that same year that the first Negro physician was certified by the American Board of Psychiatry and Neurology. He at that time was the professor of neurology and psychiatry at Meharry Medical College. Since then 12 men have received their certificates. Seven of them are now holding teaching positions either in medical schools, teaching hospitals, or Veterans Administration centers. At present there are 20(14) Negro physicians in training in neurology and psychiatry throughout the United States. They are located as follows: Menninger Clinic, Topeka, Kansas; Freedmen's Hospital, Washington, D. C.; Cleveland City Hospital; Colorado Psychopatic Hospital, Denver; Illinois Neuropsychiatric, Chicago; Cushing General Hospital, Massachusetts; Kings County, Brooklyn; Veterans Administration under the supervision of Long Island Medical College; Columbia University, New York; Homer G. Phillips Hospital, St. Louis; Institute of the Pennsylvania Hospital, Philadelphia. Other hospitals where Negroes in the past have received psychiatric training are Massachusetts General and Boston Psychopathic in Boston, New York State Psychiatric and Bellevue Hospital in New York City. Of the above facilities mentioned where Negroes received training, 2 are Negro hospitals. They are Freedmen's Hospital in Washington, associated with Howard University Medical School, and Homer G. Phillips Hospital in St. Louis under the directorship of Washington University Medical School, the latter being the only Negro hospital approved for training of residents in neurology and psychiatry at the present time, being approved for 3 years in neurology and 2 years in psychiatry. Since its approval in 1941, 2 of its men have been certified. The training program was of necessity curtailed by the war years and there are 2 residents in training at the present time. Just recently the United States Public Health Service, Division of Mental Hygiene, appraised this hospital's service regarding grants for the expansion of an already existing facility for training.

Postgraduate Education

One of the greatest methods of disseminating psychiatric information has been the growth of postgraduate activities under the leadership of medical societies, medical schools, government agencies, and hospitals for the renewed interest and continued education of the general practitioner. Many conscientious physicians attempt to keep themselves informed of psychiatric advances by individual study and reading, but there is being felt among Negro physicians a keen need for refresher courses and for frequent periods of instruction and training along neuropsychiatric lines. This need is manifested by sporadic postgraduate courses designed for Negro physicians in various areas of the United States besides the regularly scheduled postgraduate courses in various states and municipalities which they might attend. A few of these courses are mentioned below:

1946—The Southern California Medical and Dental Society, 2-day refresher course, Los Angeles and San Francisco. (1) General psychiatric principles. (2) Psychosomatic medicine. Attendance: 30-40 Negro general practitioners.

1947—West Virginia State Medical Society, 2-day symposium, "Psychiatry in General Medical Practice." (1) The neurological examination. (2) Early symptoms of psychoses. (3) Modern treatment of neurosyphilis. Attendance: 66 Negro general practitioners.

1948—The Medico-Chirurgical Society of the District of Columbia, 1-day meeting, "Psychososomatic Medicine." Attendance: 80-90 Negro general practititioners.

1948—Interne Alumni Association, Homer G. Phillips Hospital, 3-day refresher course, St .Louis, Missouri. (1) The neurological examination. (2) Early recognition of general paresis and schizo-

phrenia. (3) Diagnosis of psychoneuroses. (4) Lecture on "Psychiatry in General Medical Practice" followed by a round-table discussion. Attendance: 300 Negro general practitioners.

1949—Interne Alumni Association, Homer G. Phillips Hospital, 5-day refresher course, St. Louis, Missouri. (1) Recent advances in the diagnosis of convulsive disorders. (2) Psychiatric aspects of hypertension. (3) Differential diagnosis of neuroses. (4) Lectures and demonstrations of psychosomatic medicine. Attendance: 384 Negro general practitioners.

Summary

1. From a general standpoint it is clear that the widespread interest in psychiatric medical education among Negroes has been alive only 10 years.

2. The psychiatric information dispensed at the medical school level, though not up to the 370-hour level as recommended by the Group for the Advancement of Psychiatry in their report on Medical Education, is well above 152 hours, which is quoted by that committee as the average for medical schools in the United States. However, the departments of neuropsychiatry at each Negro medical school urgently need expanded facilities, increase in professional personnel, and wider application of the ancillary disciplines such as psychiatric social work and clinical psychology.

3. It is apparent that a new and wider interest in psychiatry is being manifested by Negro physicians by their seeking psychiatric training on a graduate level in recognized hospitals, but contributions to medical literature and interest in research are still in need of stimulation.

4. There is evidence that the Negro general practitioner in various communities of the United States is seeking to improve his understanding and information regarding psychiatric principles by attending various postgraduate meetings in neuropsychiatry.

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10. Anderson, D. G., and Tipner, A. 48th Annual Report, Council on Medical Education. J. A. M. A., **138**: 29, Sept. 4, 1948.

11. Council on Medical Education and Hospitals. J. A. M. A., **137**: 74, May 1, 1948.

12. Quoted by Ebaugh and Rymer. Psychiatry in Medical Education. The Commonwealth Fund, 1942, p. 226.

13. Personal communications from the American Board of Psychiatry and Neurology.

14. Personal inquiries with directors of said hospitals.

DISCUSSION

Dr. Rutherford B. Stevens (New York City).—Not only do more Negro physicians need postgraduate psychiatric training, but it is also pertinent to point out that psychiatric training needs Negroes. It is now a fact that all of psychiatry recognizes, in some degree, the important influences of social and cultural attitudes and customs on the manifestations of personality disorders. The enthusiasm for the team approach is evidence of this. There is much talk of collaboration with sociologists, anthropologists, social workers, and many other specialists in an effort to solve more effectively the problems of mental illness. The psychiatrist, however, who brings a restricted concept of the nature of man, bound by the conventional understandings and irrational prejudices common to his own circle as a middle-class highly educated medical man, will certainly prove of little value to other social scientists in such cooperative efforts. Such a concept will also prove detrimental in the individual treatment of many patients who may come from different categories of our variegated society—each category with its own subculture and its own customary ways of reacting to the special problems of the environment. Psychiatric training in the past has been deficient in stimulating a consciousness of social problems as contributing factors to mental ill health. The very presence of Negro physicians in psychiatric training facilities makes for an increased awareness by psychiatrists of one of America's major social problems—intergroup tension. Intergroup tension has frequently been called the greatest of our social ills. Certainly psychiatry has a greater responsibility toward the solution of this and other social problems than it has demonstrated in the past.

In order to provide effective treatment of the mental ills of all the population, it is necessary that psychiatrists be free from irrational social prejudices

and have understanding of the special social and psychological phenomena which affect the 40,000,000 members of minority groups. The close contact of white and Negro physicians in training centers provides an opportunity for counteracting widely prevalent stereotyped ideas about the Negro in our society. It should be unnecessary to point out that such stereotyped ideas would prove detrimental to effective psychiatric therapy with Negro patients.

Dr. Erwin has pointed out that Negro general practitioners, like other physicians, are showing an increasing interest in refresher courses and other sources of information concerning modern psychiatric principles. It is hoped that, in areas where the Negro physician is considered separately, greater efforts will be made by psychiatry to provide opportunities for the effective satisfaction of this interest. Psychiatry has a duty to both medicine and the public to aid general practitioners in obtaining a more effective psychiatric orientation. For this reason, advantage should be taken of every opportunity to play an educative rôle in relation to other physicians.

An effort has been made to show that Negro physicians need more psychiatric training and that psychiatric training needs more Negroes. All the problems which make for difficulty in obtaining psychiatrists, in general, affect the Negro. In addition, the number of Negro psychiatrists is affected by the disproportionately small numbers of Negroes who receive college and medical training and the inability of those who do to afford further training.

COMMENT

ASSOCIATION ACTIVITIES AND INTERESTS

The writer welcomes the opportunity to review briefly some of the activities of The American Psychiatric Association and to record impressions. It is interesting to note the increasing scope of the Association, especially through field representatives and committee members. It is fine to have so many members participating. There is evidence that a well-considered program has been or is being evolved with definite efforts to apply principles of good organization and energetic administration.

A substantial increase in Association income and other resources make it possible to embark upon many worth-while enterprises. Some critics appear to have the impression that too rapid progress has resulted in overexpenditure of funds through assuming obligations for which the Association is not yet prepared. It is believed, however, that a real budget has been or will be established and enforced by the proper committee, postponing some worthy enterprises until funds become adequate. Mental hospital inspection facilities, of unquestioned importance, are now available. It is hoped this program eventually will become self-sustaining. Other important plans such as personnel educational training, including conferences of hospital superintendents and staff members, may likewise become self-supported or made possible, *e. g.*, through foundation grants.

Rumors of factions or schisms within the Association have been very disquieting. A united association membership is essential for successful operation. Members should recall that they are *medical practitioners.* As such, it is to be expected that groups of members and individuals will become interested in special diagnostic forms and methods of therapy not necessarily wholly inclusive. Provided medical ethics and the Hippocratic Oath are observed, such groups and individuals should have the respect of the general membership. Such special trends, even if only temporary, may ultimately represent progress. Psychiatrists should, above all physicians, demonstrate the ability to be tolerant and to live successfully with fellow members; otherwise how shall they expect to advise and help others in these troublesome times. In a word, the membership should set an example by integration of the different psychiatric elements. Furthermore, it is well to practice a selective or so-called "eclectic" psychotherapy in view of the varied needs of the patients.[1]

There seems to be insufficient appreciation of the fundamental importance of the medical administration of mental hospitals.[2] The affairs of hospitals are often overshadowed by community programs. There is no question as to the importance of extra-institutional activities. The founders of the Association, however, were mental hospital administrators and outstanding men of their time. Hospitals, moreover, still provide the treatment and care facilities for the vast proportion of mental patients. It is gratifying to know that there will be a section on Administrative Psychiatry or on Mental Hospitals.

The A.P.A. Newsletter and accompanying data keep the members informed about developments in the varied field of mental health. This service is appreciated especially by members who are retired or are otherwise finding it inconvenient to attend meetings. In this connection, would it not be well for the Council to consider periodical interval meetings in different sections of the United States and Canada, thus to reach members who are too remotely situated to attend regular annual meetings.

The revision of the Constitution and By-laws will doubtless tend toward a more democratic organization. The proposed A.M.A. form of organization appeared too cumber-

[1] Billings, Edward G. The dynamics of psychiatry: An eclectic point of view. Am. J. Psychiat., **106**: 346, Nov. 1949.

[2] Russell, William L. The rôle of medical administration in psychiatric hospital treatment. Am. J. Psychiat., **105**: 72, April 1949.

some to many members. It also rather drastically changed some traditional features such as the long time powers of the president in respect to committee appointments, transferring this and other authority to a so-called "speaker." Some of the recent suggestions seem to be more acceptable and offer the individual members a number of important powers.

W. C. S.

THE MINNESOTA MENTAL HEALTH PROGRAM

The mental hygiene program in the Minnesota state hospitals is passing through an interesting phase of transition. Governor Youngdahl has made the modernization of the hospitals the primary objective of his administration and the 1949 Legislature provided a budget of $28 million for this purpose. This generosity was not anticipated; consequently there was little time for preliminary planning before the funds became available on July 1, 1949. The primary emphasis was to augment the existing professional staff with only minor plans for new construction, the expansion of buildings having been at least partially provided by the preceding Legislature. Probably the greatest handicap to be reckoned with is the time limit. Some real progress in the program must be evident when the Legislature next meets in January, 1951, to justify renewal of such a large appropriation. Since modernization cannot be accomplished overnight, the problem of demonstrating the value of the new plan in a relatively short time is a considerable one.

During the first 4 months, however, much headway has been made. The hospital superintendents, though universally opposed to the use of mechanical restraint, had not been able to eliminate it completely because of the shortage of ward personnel. The Governor issued an executive order prohibiting the use of mechanical restraint except in emergency, or at the discretion of each superintendent who must personally assume responsibility for its use. In one hospital where no mechanical restraint has been used for many months there are now 8 open wards. In this hospital there are several volunteer recreational groups who visit patients three times each week with resulting marked improvement in the morale of both patients and staff.

On July 1 a single menu was introduced in all the hospitals for both the patients and staff. One of the major criticisms has been the poor and badly served food for the patients. The single standard diet has done much to improve this service.

While there has been a marked increase in personnel, the staffs are still inadequate because the working hours of the ward personnel were reduced from 48 to 40 per week. The ratio of staff to patients has not increased in proportion to the increase in personnel.

A new staff classification known as psychiatric aides has been established. Civil Service requirements for these appointments include high school graduation. Through financial inducements college graduates with some knowledge of psychology and sociology are sought for these positions. It is hoped that aides will take an active rôle in individual and group therapy under the supervision of the psychiatrist.

A Commissioner of Mental Hygiene who can assume the full responsibility for the coordination and development of the statewide program is still to be appointed. Also to be filled is the post of chief psychiatric social worker to develop a new program of psychiatric social work within the hospitals and to establish a new liaison with the community—a serious deficiency in the former program. The School of Social Work at the University of Minnesota would be glad to use the state hospitals as field placements for their students, but is unwilling to do so until there is a competent head of psychiatric social work to provide adequate supervision and training.

Psychologists have been placed in some of the state hospitals to participate in the training of psychiatric aides and nurses, to help organize group therapy, to assist under the direction of the psychiatrist in individual therapy, to coordinate various other services, *e. g.*, occupational therapy, rehabilitation work shops, and ward activities. Appointees to these positions are graduates in

clinical psychology; the majority are trained to the Ph. D. level with 4 years of experience in veterans' hospitals or in the university psychiatric department. The criticism that these clinical psychologists are encroaching on the psychiatrists' job is partially justified, but these young men have been trained in psychotherapy and the shortage of psychiatrists is acute.

There has been some reluctance to accept this new program completely by some of the superintendents of the state hospitals who feel, understandably, that it infringes their administration, and that much of the program has been imposed through outside pressures. This is unfortunate as the community groups that have actively promoted public appeal to back these improvements had no criticism of the hospital authorities, but proceeded with the hope that these improvements would increase the efficiency of the hospitals. It was also felt that outside assistance was essential, as the state hospital superintendents over the years had been unable to secure necessary financial aid to carry out the modernization of their hospitals. The superintendents are apprehensive that the sudden expansion may prove impracticable, that the public enthusiasm that had led to the changes might suddenly evaporate and ultimately leave the position of the hospitals more unfortunate than it had been originally.

To date the development of the program seems healthy and to offer considerable promise of improvements of the state hospital service. The remaining 14 months before the new Legislature convenes will be the critical period. Governor Youngdahl is to be congratulated for his forceful, intelligent, and fearless stand in promoting these changes in the state hospital system, and he has done so with the full knowledge that any failure in carrying out the program will be used against him by the political opposition.

ERIC KENT CLARKE, M. D.

NEWS AND NOTES

NATIONAL COMMITTEE FOR MENTAL HYGIENE, ANNUAL MEETING.—The 40th annual meeting of the National Committee was held on November 16 and 17, 1949, just 40 years short of one day of the date of its organization. The meeting as is customary was planned to deal with the issues facing the field as of this year and was presented in 5 parts for this purpose.

The first session recognized that good mental hygiene work is going on in many different fields and especially in the ordinary day's work—a day in the life of a recreation worker, a police officer, and a teacher revealed the mental hygiene problems involved. The second session followed the progress of efforts to cope with mental illness. Since illnesses are so frequently rated according to their position in the mortality statistics, a new approach was presented dependent rather upon working years lost. A summary of 15 years of research, in large part supported by Scottish Rite funds, was presented showing the strategy of attack, and finally perspectives gained in a recent hospital survey of New York State were given under the title, "Objectives for a Psychiatric Program."

The third session was concerned with the development of the citizen as the agent responsible for what is done for the mentally ill. Dr. F. C. Redlich reported on his study of what the citizen knows about psychiatry. Albert Deutsch submitted an exposé of the exposé and was presented with a Lasker Press Award for work done in this field. The American Theatre Wing presented a dramatic sketch demonstrating one approach to informing the public.

The fourth session was the annual luncheon at which the regular Lasker Award was presented to Miss Mildred C. Scoville of the Commonwealth Fund, for "Outstanding Contribution to the Integration of Mental Health Concepts in Medical Education and Public Health," by Dr. John R. Rees. Dr. Rees also addressed the luncheon gathering on the principle that international amity begins at home.

The fifth session again dealt with the citizen and with the principle that working for mental health brings about new understanding within the worker himself, on the one hand through the growth that he experiences by undertaking a serious job, and on the other hand the stagnation that he experiences by going through useless motions.

The program was so set up that opportunity for discussion equaled in time that provided for the main presentations. The annual business meeting was absorbed with the election of the Board of Directors and Council, and plans ahead for the mental hygiene field. The sessions were attended by 725 persons and the luncheon by 400.

INTERNATIONAL CONGRESS OF PSYCHIATRY.—The previously announced date of the Congress was October 4-12, 1950. This date has been changed and the Congress will definitely take place from September 18 to 27, 1950.

The seven sections of the Congress are: (1) general psychopathology, (2) clinical psychiatry, (3) cerebral anatomo-physiology and biology, (4) biological therapeutics, (5) psychotherapy, psychoanalysis, and psychosomatic medicine, (6) social psychiatry, and (7) child psychiatry.

Thirty-nine participating countries have already given their official adhesion. During the Congress there will be an exhibition of psychopathological art in Ste. Anne and an exhibition on the history and progress of psychiatry in the Palais de la Découverte, Paris.

For further information please write to Dr. Henri Ey, Secretariat Général, 1, Rue Cabanis, Paris XIV.

PSYCHIATRY IN DENMARK (AARHUS AND COPENHAGEN).[1]—At the two University centers, Aarhus and Copenhagen, formerly in-

[1] This item is abstracted from Dr. Robert A. Clark's report on psychiatry in Denmark. A previous report by Dr. Clark on psychiatry in Switzerland appeared in the August 1949 issue.

fluenced largely by German psychiatry, there is now an increasing interest in American psychiatry but retaining the original orientation toward physiology and constitutional studies. At the state mental hospital at Resskov near Aarhus (director: Dr. Erik Strömgren) a new children's unit will soon be built. In the library of the Resskov hospital are found all the latest American psychiatric journals. A unique position at Aarhus is that of social psychiatrist, who investigates, among other things all cases of unemployment for long periods without evidence of disability.

In Copenhagen are three teaching clinics, at the Kommunehospital (director: Dr. Paul Reiter), at the Rigshospital (director: Dr. Hjalmar Helweg), and at the Bispebjerg Hospital (director: Dr. Clemmesen). Many interesting studies are being carried on, including suicide, shock, the electroencephalogram in paresis, and the effects, physiological, psychological, and sociological, of night work on industrial employees.

At Hertedvester, near Copenhagen, is a special institution for psychopathic criminals (director: Dr. Stürup). The 200 inmates are all under indefinite sentences, and the work of the psychiatrists is reported to have resulted in rehabilitation in many cases.

Dr. Martinsen-Larsen introduced the use of antabuse, and most of his patients continue at work throughout treatment. For social and psychotherapy Dr. Larsen has initiated group activities somewhat along the lines of Alcoholics Anonymous.

In the homes for the aged in Copenhagen special closed divisions have been provided for psychotic patients. By this means patients can live nearer their relatives, and overcrowding of the mental hospital with senile patients is lessened.

The Danish Society for Psychotherapy (president: Dr. Oluf Brüel) has presently only eight members. Two Danish psychiatrists are being trained in New York in psychoanalysis. A Danish Society for Mental Hygiene was established several years ago under the leadership of Dr. Jarl Wagner Smitt. This society is actively promoting public education and the formation of a research council for Danish psychiatry.

SWISS SOCIETY OF PSYCHIATRY.—Dr. Eugen Kahn has kindly reported that at the fall assembly of the Society in Bern, Nov. 19 and 20, 1949, the main topic of discussion was surgery of the frontal lobes, particularly leucotomy. There was fair agreement as to indications for operation; encouraging results being reported in chronic involutional depressions and in anancastic and phobic obsessions but much less favorable in schizophrenia.

It was emphasized that three postoperative phases must be distinguished: (1) the immediate sequelae of the operation lasting from a few days to two months; (2) the phase of adjustment, which may extend to three years, more often about 1½ years; (3) the establishment of the final definite condition. There was consensus that psychosurgery should be regarded only as an *ultima ratio,* and the necessity for postoperative care and especially psychotherapy was duly stressed. The speakers reported failures and relapses as well as favorable results. Those taking part showed thorough acquaintance with the work being done in the United States in this field. A report on leucotomy for the relief of pain was disappointing in results.

WIENER KLINISCHE WOCHENSCHRIFT.—The Oct. 28, 1949 issue of this journal is devoted entirely to contributions in psychiatry and neurology mainly from the Psychiatric-Neurological Clinic of the University of Vienna and also from the Vienna Polyclinic and the Neurological Institute Rosenhügel in Vienna.

This number of the *Wochenschrift* is a memorial to Professor Otto Kauders, to whom fitting tribute is paid by Herbert Reisner. A comprehensive paper by the late Dr. Kauders on psychotherapy in cardiac and circulatory disorders is the initial contribution. Professor Erwin Stransky writes on group psychotherapy and others from the several clinics mentioned contribute the remaining articles. The special issue of the *Wiener Klinische Wochenschrift* thus composed renders suitable honor to the late Dr. Kauders and is gracious recognition of the medical disclipine he represented.

SEX OFFENDERS AND THE LAW.—The November 1949 issue of the *Journal of So-*

cial Hygiene is devoted to the subject of sex offenses, what steps have been taken to deal with them, and what still needs to be done. Of particular interest is the article by Dr. Paul W. Tappan, professor of sociology, New York University, and consultant to the New Jersey Commission for the Study of the Habitual Sex Offender. He feels that legislation for the control of this type of offender should be based on further study of the clinical types of criminals involved. He comments that the present New Jersey law "represents the most reasonable formula for providing treatment to those individuals who most clearly need it."

Details of state laws dealing with habitual sex offenders, operative in Illinois, Michigan, Minnesota, Massachusetts, Ohio, Wisconsin, Pennsylvania, Indiana, New Jersey, Vermont, New Hampshire, Washington, California, and Washington, D. C., are given in convenient tabular form.

NEUROPSYCHIATRIC MEETING, ARKANSAS.—The annual neuropsychiatric meeting at the VA Hospital, North Little Rock, Ark., will be held Feb. 23 and 24, 1950. A number of nationally known leaders in neuropsychiatry and related fields are expected to participate, including Drs. Walter Alvarez, Pearce Bailey, Daniel Blain, Edwin F. Gildea, Karl Menninger, John N. Rosen, and Howard A. Rusk. There will be no charge for registration, and attendance of all interested professional personnel will be welcomed. Further information may be obtained by writing to the director of professional education, Dr. E. S. Chappell, VA Hospital, North Little Rock, Ark.

SOUTHERN PSYCHIATRIC ASSOCIATION.—The Southern Psychiatric Association held a largely attended and very successful annual meeting at the Roosevelt Hotel in New Orleans Nov. 28 and 29, 1949. Notable on an excellent program was a paper by Alton Ochsner on "The Importance of Psychiatry in Surgery," in which the speaker demonstrated the necessity for the surgeon to consider his patients from the psychiatric as well as the surgical point of view and indicated the unfortunate consequences of disregarding personality types and actual or potential nervous reactions in surgical patients. This admirable paper presented strong contrast to the general attitude of surgery not so many years ago and to the attitude of some surgeons even today.

The Southern Psychiatric Association is growing and numbers presently about 175. Officers for 1950 are as follows: Dr. R. Finley Gayle, Jr., Richmond, Va., president; Dr. R. Burke Suitt, Durham, N. C., president-elect; Dr. Newdigate M. Owensby, Atlanta, Ga., reelected secretary-treasurer; Dr. Arthur J. Schwenkenberg, Dallas, Texas, chairman board of regents. Dr. Walter J. Otis, New Orleans, the retiring president, becomes a member of the board, as do also Dr. Joseph L. Knapp of Dallas and Dr. O. S. Hauk of Nashville, Tenn. It has been tentatively arranged that the 1950 meeting will be held in Williamsburg, Va.

CHICAGO MEDICAL SCHOOL LECTURE SERIES.—Six lectures on the development of behavior are being held at the Chicago Medical School, 710 So. Wolcott Ave., on Wednesdays at 12:30 p.m. on Jan. 11, 18, Feb. 1, 8, 15, and Mar. 8. These lectures deal with behavior both normal and abnormal from the anatomical, neurological, psychological, psychiatric, and sociological standpoints, and including criminal conduct.

VA RESIDENCIES, MASSACHUSETTS.—A limited number of openings in neuropsychiatry are available for appointment beginning July 1, 1950. This program is under the jurisdiction of the Deans of the Boston medical schools (Harvard, Tufts, Boston University). Training, which includes general psychiatry, child psychiatry, and neurology, may be from 1 to 3 years and is given at Cushing VA Hospital, Framingham, Mass.; Bedford VA Hospital, Bedford, Mass.; The Mental Hygiene Clinic of Boston, Regional Office of Veterans Administration, Boston; West Roxbury VA Hospital, West Roxbury, Mass.; and White River Junction VA Hospital, White River Junction, Vt.

For information write to Dr. J. L. Hoffman, Bedford VA Hospital, or Dr. Wilfred Bloomberg, Cushing VA Hospital.

VA RESIDENCIES, MISSOURI.—The VA Hospital at Jefferson Barracks, Missouri, in

the suburbs of St. Louis, announces a 3-year training program in neuropsychiatry in affiliation with the neuropsychiatric department of Washington University School of Medicine which is designed for qualification for the American Board of Psychiatry and approved by the A.M.A. Training will be under the direction of the Deans' Committee of Washington University and St. Louis University Schools of Medicine.

The training time will be divided about equally between on-the-job supervised work at the hospital and affiliated training at Washington University. The latter includes all fields in psychiatry and neurology, with lectures in clinical psychology and experience in the child guidance clinic.

Junior residents receive $2,400 per annum, intermediate $2,700 and senior $3,000. Advancements are made annually based on progress.

For information address the personnel officer, VA Hospital, Jefferson Barracks 23, Missouri.

CORRECTION.—In the editorial comment regarding the American Board of Psychiatry and Neurology in the October 1949 issue of this JOURNAL, it was erroneously stated that two years of experience are necessary, in addition to 5 years' training, for certification in both psychiatry and neurology. Actually the requirement is for one year of experience.

REPORT OF THE NOMINATING COMMITTEE

The Nominating Committee presents the following nominations for the election of officers of The American Psychiatric Association to be held at the annual meeting in Detroit, Michigan, May 1-5, 1950.

For President-Elect: Dr. Leo H. Bartemeier, Detroit, Mich.

For Secretary: Dr. R. Finley Gayle, Jr., Richmond, Va.

For Treasurer: Dr. Howard W. Potter, New York City.

For membership to the Council (Three members are elected and the retiring President, Dr. George S. Stevenson, automatically becomes the fourth member): Dr. Harry J. Worthing, Brentwood, N. Y.; Dr. Juul C. Nielsen, Ingleside, Nebraska; and Dr. DeWitt C. Burkes, Portland, Ore.

For Auditor: Dr. Thomas W. Hagerty, Stockton, Calif.

KARL M. BOWMAN, *Chairman*
EARL D. BOND
SAMUEL W. HAMILTON
WINFRED OVERHOLSER
GEORGE H. STEVENSON

BOOK REVIEWS

THE BRITISH ENCYCLOPEDIA OF MEDICAL PRACTICE INCLUDING MEDICINE, SURGERY, OBSTETRICS, GYNAECOLOGY, AND OTHER SPECIAL SUBJECTS: MEDICAL PROGRESS 1948. Editor in Chief, *Rt. Hon. Lord Horder, G. C. V. O.; M. D.; B. Sc.; F. R. C. P.* (London: Butterworth & Co., 1948.)

This encyclopedia of 511 pages is an ambitious undertaking for it includes a wide range of subjects. The volume is divided into three parts. Part I is devoted to "Critical Surveys" covering 168 pages; Part II, limited to 9 pages, summarizes "Recent Developments in Pharmacology and Therapeutics"; while Part III consisting exclusively of abstracts runs from page 179 to page 511.

The "Critical Surveys" contain much useful information concerning important recent contributions to various branches of medicine. Each of the 14 sections has been compiled with adequate bibliographies by an authority in that particular field. These sections include, among others, reviews in medicine, surgery, pædiatrics, cardiology, acute infectious diseases, industrial medicine, psychological medicine, chemical pathology, and progress in vitamins.

Part II is concerned largely with the therapeutics of penicillin, streptomycin, and the use of folic acid in the treatment of macrocytic anæmias.

The comprehensive abstracts that fill Part III are arranged alphabetically, beginning with "Abdominal Pain and Acute Abdominal Emergencies" and ending with "Yaws." As these two examples indicate there is no system that applies to the selection of titles for these abstracts. Some headings, such as the first mentioned above, refer to broad subjects under which several conditions may be listed; others name a specific disease such as scarlet fever; many include an entire system, such as "bone diseases"; several refer to a symptom such as backache, while fairly often technical procedures such as " radiology in diagnosis and treatment" are used as captions. Considerable space is given to psychiatry, psychological medicine, the psychoneuroses, and the psychoses.

An alphabetical arrangement of titles such as these renders it essential to use the elaborate index in order to obtain information concerning any particular subject, for the desired information may be found in half a dozen different places scattered through all three parts of the volume. Thus penicillin forms a subject for review in the surveys on medicine, cardiology, and pharmacology and appears, in addition, in 7 different places amongst the "Abstracts" of Part III. Folic acid is listed in the index as appearing in 10 different places. Perhaps such repetition is unavoidable, and the accuracy and completeness of the index compensates for any inconvenience it may have.

The "Surveys" are well written and the abstracts are exceptionally good and have been selected from journals of international reputation.

WARFIELD T. LONGCOPE, M. D.,
Lee, Mass.

THE SHAME OF THE STATES. By *Albert Deutsch.* (New York: Harcourt Brace & Co., 1948.)

This book by the author of the excellent history, *The Mentally Ill in America,* contains descriptions, with pictorial illustrations, of conditions that he has observed in some of the public hospitals for the mentally ill. The history of institutional care and treatment of the mentally sick was, he says, "strewn with asylum horror tales." Those he here relates are similar to the many previously published. Like other recent journalist writers, he underestimates the universally prevalent effects of war and postwar economic conditions on hospital maintenance and organization. The author has also become doubtful of the value of "horror tales" as a means of solving the complex and difficult problems presented. He finds that the "countless newspaper exposés of mental hospitals" have accomplished "very little if anything." He considers that "the day of the individual crusader is over. Our time calls for organized, persistent effort in behalf of desired social change." This is, in fact, the view that has always guided those who, through the years, have borne the heat and burden of the task.

In considering responsibility for the conditions he describes, the author discards the usual custom of looking for a "scapegoat" among those in immediate charge of administration and treatment. He finds that "the main fault was not in personnel, or even in the particular institution they served." He was, in fact, "repeatedly awed by the loyalty and loving kindness of people who doggedly carried on their assigned tasks against great odds." The real culprit and "the main root of the evil" lies, he declares, "in an impersonal patchwork known as the state hospital system which has fed, down the decades, on official neglect, professional indifference and public ignorance." However, some of the worst conditions described were not in state institutions but in municipal receiving hospitals. Finally, he concludes that "we, the public, share the blame with our state officials and our state legislators who, through indifference and niggardliness, sanction sub-human treatment of innocent humans who fall sick in mind."

Notwithstanding this denunciation of the state hospital system, and though hospital provision, after a development for more than a century by "state medicine" as "an accepted principle in the care and treatment of the mentally ill," is now described as "the shame of the states" and the subject of "horror tales," and the state hospital system the culprit of the "deep-seated sources of evils and

abuses," the author finds "nothing inherently bad in any system of government sponsored medicine," and that "it is incumbent upon professional and lay people alike to recognize . . . . that institutional psychiatry in this country, thanks to the dictates of historical necessity, has been, is, and will continue to be mainly state-controlled." It seems not impossible, however, that now that the nature, prevalence, and treatment of mental illness are better understood by the public, privately supported voluntary organizations may yet provide for the mentally sick hospital provision of the same superior type as that developed, during the same period, for all other sick persons.

The author apparently considers that The American Psychiatric Association and the National Committee for Mental Hygiene have ignominiously failed to promote hospital improvement by means of public exposures. "Hitherto," he says, "the Association has not only avoided public exposure of unwholesome conditions in mental hospitals, but from time to time has rushed to the defense of exposed institutions," and has "often come forth with a big whitewash brush." The century-long record of the Association of constant effort for the advancement of hospital provision and standards furnishes sufficient answer to this unsupported accusation. The National Committee, although "improvement of mental hospital conditions was one of the main aims . . . . when it was founded . . . . in time," the author says, "became dominated largely by institutional heads . . . . who felt their status and security might be upset by public exposures. Thus a potentially powerful organ for betterment was transformed into what was, in effect, a cloak for evils and abuses." This statement is exactly contrary to the facts. The Committee was never dominated by institutional heads. When it was founded, however, practically the only psychiatrists available were those connected with institutions. In this period the funds donated to the Committee were given specifically for "improving the treatment of the insane." The most intensive and effective campaign for improvement of the hospitals which the Committee has ever engaged in was then instituted, and some of the most eminent of the institutional psychiatrists collaborated with the medical director of the Committee. Much was accomplished. It was "in time" that, contrary to the author's understanding, it was considered by a new medical director and those who governed the policies and activities of the Committee that a more definite mental hygiene program directed to early treatment, prevention, and measures for the promotion of mental health should be developed, and that improvement of hospital treatment would eventually be effectively accomplished by a "flank attack" through the broader program. Consequently, the interests and contributions of donors were diverted from direct service to the hospitals, and since then the Committee has never had adequate funds for this purpose.

An uninformed reader of this book might gain an impression that the dreadful conditions depicted prevailed *throughout* the particular hospital, and perhaps were common to all hospitals for the mentally ill, and that every patient was exposed to them. This is of course not true, but an appalling prospect is here held out to a mentally sick person and his relatives when faced with the necessity of obtaining hospital treatment. Much anxiety is also occasioned patients within the hospitals who read newspapers and periodicals, and their relatives. Such publicity is also said to be adding to the difficulty in obtaining suitable candidates for positions involving care of the patients, and it contributes to the widely prevailing aversion to relations with the hospitals which has to be reckoned with in obtaining the "frequent visits and mutual study" of conditions which the author proposes to "the average citizen."

It should be understood, especially by those who have a little knowledge of the public hospitals for the mentally ill obtained solely from superficial observation and inquiries, that the primary obligation of the medical superintendent and his staff is the welfare and treatment of the patients under their immediate care. They would not willingly do anything that would add to the suffering of these patients or occasion distrust and anxiety in their relatives, from whom they need confidence, understanding, and cooperation. No one can know as well as they do the inadequacies of the present hospital provision, which, at various times and places, occasion even the grossly shocking conditions revealed in this book. They know also, however, that, even under these circumstances, there is no other place where any except a small percentage of the mentally ill can obtain understanding, consideration, and appropriate hospital treatment equal to that provided by the public hospitals. To realize this it is only necessary to read in *The Mentally Ill in America* what they were subjected to before there were these hospitals; also to note what they are now subjected to in municipal receiving hospitals, connected in most instances with highly reputable general hospitals, and to learn how they are treated in the communities and, in some instances, even in their homes, before they find refuge in the state hospitals. The medical superintendent of the hospital, within the framework of the provision made by society, endeavors to employ all the available resources in fulfilling his obligations. The author found little evidence to support the intimation in an editorial in *Mental Hygiene* that there is a disposition in the hospital administrators "to conceal the shortcomings of the system and to [thereby] let themselves be thought of as its protectors and advocates." He says that, though "at times, provision to inspect . . . . was granted with much reluctance . . . . in the majority of instances I went into the institutions at the express invitation of the officials concerned." Any responsible citizen, who has a proper reason for entering any part of a public hospital for the mentally ill, can readily obtain admission.

WILLIAM L. RUSSELL, M. D.,
New York City.

PROJECTIVE METHODS. By *Lawrence K. Frank.* (Springfield, Ill.: Charles C. Thomas, 1948).

In 1939, Frank, in an extremely well-written paper (J. Psychol., **8**: 389-413), coined the term, "projective technique," to describe such psychological evaluative methods as the Rorschach and Thematic Apperception Tests and offered a provocative and insightful discussion of the significance of these newer methods for disclosing personality trends. The paper ranks as one of the most important of recent years. Providing both a name for this series of psychological test methods and a convenient conceptual frame of reference for their utilization, it had the effect of accelerating significantly the growth of interest on the part of psychiatrists and clinical psychologists in these techniques. It may be mentioned parenthetically that an unfortunate by-product of the adoption of the term, "projective technique," has been the confusion engendered by broadening the concept of projection far beyond the conventional psychoanalytic formulation with the result that today when a clinician or theorist talks about "projection," one does not know whether he means attribution of traits and motives, selective perception, graphomotor expression of affect, or some type of cathartic "acting out." While it may be granted that these processes are basically interrelated (the mechanisms of displacement, conversion, and reaction formation are as basically interrelated), it is still desirable for the sake of clarity of thinking and communication to denote them by different names.

The present monograph is essentially an extension and elaboration of the 1939 paper with, however, some changes in emphasis and tone. In respect to emphasis, the idea of the *uniqueness* of the individual's "private world" and basis personality structure is more strongly developed in the monograph. As a corollary, the idea of applying normative standards or frames of reference to projective technique data is decisively rejected as being applicable to the measurement of the characteristics of the "anonymous units" of a group but not to the interpretation of the productions of an *individual* who by definition presents a unique personality configuration which cannot be meaningfully compared with other unique personality configurations. In support of this thesis, Frank makes numerous references to specific procedures and concepts of modern physics as contrasted with those of classical physics. This reviewer is not able to assess the validity of this type of analogical support for a psychological thesis and suspects that many another reader will have the same difficulty. One wishes that Frank would cite data closer to hand. Since his own "Partial Bibliography" lists some 325 papers on projective methods and J. E. Bell's new book lists not less than 798 references to the Rorschach test alone, this should not be too difficult to do.

As mentioned, there is also a shift in tone between the earlier paper and the present work. The paper was expository in nature; the monograph is frankly polemical. Frank vigorously crosses swords with those psychologists (here called "psychometrists" or "statistically inclined psychologists") who insist that the same criteria of credibility be applied to communications dealing with the utilization of projective techniques as are applied to any other scientific communication.

As is usually the case with polemics, there is a liberal use of value terms and more heat than light is generated. With respect to Frank's strictures concerning the supposedly inappropriate standards and points of view of "traditional" psychologists, it may be said that what is asked essentially of reports dealing with projective techniques or any other techniques is not a "statistical" treatment of the data or that the generalizations which are made meet a particular technical criterion of credibility, but simply that: (1) the statements made be operationally meaningful, *i.e.*, that the procedures employed, the observations made, and the conclusions drawn be stated specifically and concretely; and (2) the assertions made be verifiable, *i.e.*, that they be stated in such a form that an interested, competent person can undertake appropriate investigation to check on their truth or falsity.

With respect to the point of view that normative and group studies are alien to the spirit of projective techniques and that nothing worthwhile can be expected to come from this type of procedure, it may be said that empirical, normative group studies, rather than lengthy, unverifiable analyses of "unique" individuals, have formed the basis for the clinical application of these techniques. Rorschach's *Psychodiagnostik* was an extensive comparative study of 405 normal and pathological subjects (to the reviewer's knowledge, still the largest single group of subjects studied) which detailed the characteristic performances of "anonymous units" of a number of subgroups. One wonders how much attention would have been paid to this volume if, instead, it contained lengthy, unverifiable analyses of, say, 10 "unique" personalities. Frank's position is justified to the extent that it refers to an uncritical use of norms, *i.e.*, the application of empirically established norms to an individual (or a population) significantly different from the population from which the norms were derived. The necessary correctives for this error would seem to be: (1) more sets of norms rather than fewer, and (2) training in the sophisticated use of normative standards.

All in all, this reviewer feels that the monograph is a weaker exposition of Frank's ideas than is his 1939 paper.

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STIMULATION OF THE NUCLEOPROTEIN-PRODUCTION IN THE NERVE CELLS BY MALONONITRILE AND ITS EFFECT ON PSYCHIC FUNCTIONS IN MENTAL DISORDERS. By *Holger Hydén and Hans Hartelius.* (Copenhagen: Ejnar Munksgaard, 1948.)

This report deals with an investigation into the possibility of influencing, in the ganglion cells

of the central nervous system, the metabolism of proteins and polynucleotides by means of malononitrile. This substance had been shown by Heymans and Masoin, 50 years ago, to exercise marked paralytic effects on cerebral functions, and its action had been held to be due largely to the release of cyanide groups. Administration of sodium thiosulphate was found to be an effective antidote, an adequate dose inhibiting toxic symptoms in a rabbit poisoned with as much as 9 times the lethal dose of malononitrile.

The principal material chosen by Hydén and Hartelius for their investigation was the large motor ganglion cells of the spinal cord within the ventro-lateral group of the lower part of the cervical and lumbar intumescences; the reason for this choice being that the distribution and content of proteins and polynucleotides in the anterior horn cells in the animals investigated (rabbits) were already known from earlier work of Hydén. The micro-spectrographic methods developed by Caspersson in 1936-40 were used for analysis of the small quantities of tissue handled for nucleic acids and proteins. Proteins could be localised and estimated owing to the selective absorption of light at 2750-2850 Å by the tyrosine, tryptophane, and phenylalanine present; other amino acids present in the proteins brought about a negligible absorption of light at these wave lengths. The presence of nucleic acids produced a high selective absorption at 2600 Å caused by the purine and pyrimidine components. The concentrations of proteins and nucleic acids were estimated, after determinations of the thickness of the tissue sections had been made by an optical method elaborated by Caspersson.

Hydén and Hartelius find that intravenous injection of malononitrile into rabbits (3-4 mg. per kilo. body weight) results in increased production of nucleic acids and proteins in the large nerve cells of the central nervous system, the effect being demonstrable within one hour after injection and persisting for 48 hours. Cytoplasmic proteins, nuclear proteins, and ribose polynucleotides are all increased in quantity, no toxic effects of the injections being observable.

The authors proceed to enquire as to whether malononitrile, which causes apparently so great an effect on the nucleoprotein metabolism of nerve cells, will also affect in man functional processes controlled by the neurons.

Small pieces of the frontal cortex of material obtained, during partial lobotomy operations, from 11 psychotics (mostly schizophrenics) were examined by the microspectographic technique, pyramidal cells of medium and larger type being investigated. Hydén and Hartelius conclude from their work that certain of these pyramidal cells show a definite diminution in the content of polynucleotides from that present in corresponding cells from healthy persons not suffering from mental disorders. They state that the "protein producing system" of these cells is poorly developed.

Sixty-six persons suffering from various forms of psychoses were treated with malononitrile, the doses being given intravenously at the rate of 3-6 mg./kilo body weight. Treatments were given in series of up to 15 treatments in each series. The investigators conclude that in cases of endogenous depression malononitrile causes an initial accentuation of psychomotor retardation and depression, followed by psychomotor spontaneity and euphoria. The drug produces, in schizophrenia, an initial accentuation of autism and catatonia, followed by increased contact and mental release. In 2 cases, epileptiform attacks were produced in epilepsy-free patients. The general effect of the administration of the drug was that of a stimulation of mental functions and this, the authors conclude, is to be correlated with its effect on the nucleoprotein metabolism of the central nervous system.

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THE THERAPY OF THE NEUROSES AND PSYCHOSES. By *Samuel H. Kraines, M. D.* (Philadelphia: Lea & Febiger, 1948.)

For a third edition, this useful book on therapy in psychiatry has again been revised and enlarged. New material includes discussions of schizophrenic thinking, prefrontal lobotomy, group psychotherapy, treatment of epilepsy, and a chapter on psychiatric geriatrics.

Clear case histories illustrate applications of the various techniques of therapy, which are psychobiologic in point of view. The author covers well the psychosomatic aspects of bodily systems and psychiatric syndromes. The chapter on sex drives is excellent. The valuable discussion of geriatrics, necessary to a modern psychiatric text, presents particularly well the delirious reactions and depressions in the aged.

Shock therapy, especially insulin treatment, is carefully reviewed. However, the author could well omit discussion of such discarded drugs as beta erythroidine and also metrazol. For example, his statement, "either time or metrazol is necessary to clear up a depression in addition to psychotherapy of the personality problem" (p. 285) is inaccurate. Far better than metrazol, electroshock is the only method whereby to terminate a depression at once. Kraines' figures, that 70 to 80% of schizophrenic patients treated within 6 months after onset recover completely and permanently, are too optimistic, in the light of present-day statistics on shock therapy in schizophrenia. Complications with convulsive therapy are minimized, and the prevention of fractures by curarization should be more clearly described. Discussions should include the increasing use of unidirectional current, prophylactic use of convulsive therapy, and also its use to control manic excitement states.

Prefrontal lobotomy, which with newer modifications has increased in importance, is too briefly described. The art of interviewing deserves detailed instructions, and the rôle of the psychiatric nurse and the value of psychiatric treatment within general hospitals need more emphasis. Psy-

choanalysis, with its great influence upon the handling and understanding of mental patients, is too briefly dismissed, and several inaccuracies have gone uncorrected.

These are a few limitations, in a book incorporating in 600 pages the accepted psychiatric therapies. The book has great value for nonpsychiatric practitioners and residents in training, and neuropsychiatrists will find it a practical reference and review of the field.

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Sexual Anomalies: The Origins, Nature, and Treatment of Sexual Disorders. By *Magnus Hirschfeld, M. D.* (New York: Emerson Books, Inc., 1948.)

Sexual Anomalies is offered as a summary of the life work of the late Magnus Hirschfeld, M. D. He intended it to be a textbook on sexual pathology. Unfortunately, he died just before the work was completed. His pupils have finished the book as a memorial to their teacher.

There are 5 major divisions, or "books," composing this study. Book I deals with the normal development of sexuality; Book II describes quantitative irregularities; Book III is devoted to narcissism, hermaphroditism, androgyny, transvestitism, and homosexuality; Book IV deals with sadism, masochism, sexual murder, and necrophilia; Book V describes fetishism, exhibitionism, and scopophilia.

Book I outlines the embryonic structural development of sex variants, pointing out that there are rudiments of all male characteristics in the female and vice versa. The male and female hormones are said to appear at puberty and to cause the development of secondary sex characteristics. In tracing the psychological aspects of sexual development, Hirschfeld prefers to start at puberty, at which time, he says, the sexual instinct first makes its appearance. He recognizes that this concept contradicts the views of many scientists who maintain that sexuality exists in early childhood. He does accept the "erogenous zones" of Freud, and he is inclined to follow Stekel in outlining psychosexual development.

Book II deals with structural, physiological, and psychological factors in arrested sexual development. Clinical notations are added to illustrate the effects of inhibiting forces. There is a chapter on the effects of castration and one on hypererotism. Hirschfeld is inclined to feel that castration brings relief to hypererotics.

The remaining chapters follow the traditional pattern of the older writers on sexual psychopathology. Excellent and accurate descriptions, with illustrative cases, are given of the phenomena which the layman recognizes as abnormal and as foreign to what society can tolerate. It is difficult to escape the impression that spectacular and especially sordid cases have been selected as illustrations, and the reader might have some misgivings as to the applicability of the text to current problems, epecially when he finds cases quoted which were observed at the end of the 18th and in the early part of the 19th centuries.

Hirschfeld reveals his comprehension of sexual anomalies in his discussion of the causes and diagnosis of homosexuality. As one of the essential features of "genuine homosexuality" he lists an "intersexual constitution . . . . which is nearly always combined with a certain irritability of the central nervous system (hysteroneurasthenia)." He states that some psychoanalysts attribute certain forms of homosexuality to the Oedipus complex, and he comments, "It is a far more feasible assumption that this love is the result of homosexuality rather than its cause. Apart from the homosexual's feminine nature, he lacks a normal home, and this ties him to his mother longer and more intimately than in the case of a normal man."

After discussing the views of other writers, Hirschfeld returns to his own rather fatalistic conception of homosexuality: "This brings us to the last important point in connection with homosexuality, *i. e.*, neuropathic disposition. Although homosexuals cannot be regarded as degenerates, it is nevertheless certain that hereditary factors play an important rôle in the genesis of homosexuality. . . . ." To support this view he notes that suicides occur in 6% of the families of homosexuals. In addition to the neuropathic constitution he lists two other essential manifestations of "genuine homosexuality": (1) the "absence of normal sexual affinity" and (2) the "involuntary mental and spiritual fixation on the same sex." Yet a little farther on he says: "Many of these (homosexual) marriages are childless, but when they are not, the children are mostly of inferior mentality, unless a particularly healthy partner in the marriage brings about a comparative compensation." If one accepts literally Hirschfeld's definition, one wonders how a homosexual could be interested in marriage and what the occasion might be for the additional admonition: "The most fatal advice a doctor can give a homosexual is to marry."

It must be acknowledged that almost all textbooks err because of rigid and obsolescent classifications and because they do not present the actual facts about patients which the clinician meets in his daily practice. In this respect, Hirschfeld's book is not an exception. Nevertheless, no one questions the author's vast clinical and medicolegal experience with sexually deviated persons which he has here faithfully recorded. His book has distinct historical value and, as a source of information regarding the various types of psychosexual pathology, it should be included in the library of anyone interested in this subject.

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